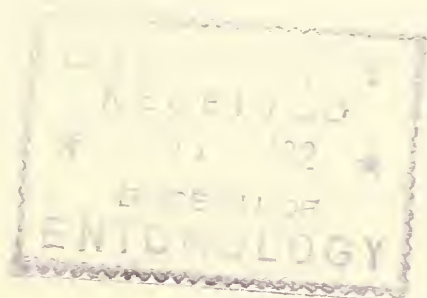


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THE INSECT PEST SURVEY BULLETIN

A periodical review of entomological conditions throughout the United States
issued on the first of each month from March to December, inclusive.



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INSECT PEST SURVEY BULLETIN

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THE MORE IMPORTANT RECORDS FOR MAY, 1932

During the first week in May grasshoppers began hatching quite generally in northern Utah, and were starting to hatch in South Dakota and Nebraska. During the second week in the month (May 13) they were first observed hatching in Minnesota, North Dakota, and Iowa, and second-instar nymphs were observed in the field in Missouri. By the 3rd week of the month they were so abundant in southwestern Oklahoma and over a wide territory in Texas as to require remedial measures and the farmers were starting to use poisoned bran. The situation is reported as serious in the Great Plains region and in scattered localities southward to Texas.

The cutworm situation reported in the last number of the Insect Pest Survey Bulletin has not materially changed. Reports of occurrence have been received from the greater part of the country.

The Hessian fly infestation appears to be heavier and more general throughout the winter wheat belt than it has been in several years.

The chinch bug situation has not materially changed. Despite the cold rains in early May, these insects are still present in threatening numbers in southern Illinois and central Missouri.

The green bug developed to destructive numbers in west-central Missouri and northwestern Mississippi. A small outbreak was also reported in south-central Pennsylvania.

The corn ear worm put in its appearance during the month in the southern half of Mississippi; by the third week in the month there was a heavy infestation on tomatoes in the Gulf Coast district of Texas.

Reports of heavy infestations of alfalfa by the pea aphid have been received from Pennsylvania, South Carolina, Ohio, and Mississippi. The numbers of these insects were decidedly below normal this month in Wisconsin and Oregon.

By the first of the month an unprecedented flight of moths of the alfalfa webworm (Loxostege commixtalis Walk.) occurred in Colorado and

Wyoming. The moths were so numerous as to occasion the closing of stores in some towns and materially inconvenienced motorists by their enormous numbers. By the end of the month new plantings of alfalfa were being damaged and eggs were very numerous in the field.

The alfalfa weevil has been found well established in the San Joaquin Valley of California.

Estimates of damage as high as 20 per cent by the sugarcane beetle to rice and sugarcane have been reported from Louisiana.

In southern Illinois first emergence of the codling moth in cages was on April 22 with a heavy emergence on May 3. The peak of emergence occurred in central Illinois by the 20th up to which date no emergence had been recorded in the northern part of the State. The first adults were observed in Delaware May 4, in southern Pennsylvania May 11, and in central Pennsylvania May 19, in Ohio May 6, in central Missouri May 4, and in northern Missouri May 9. In the Pacific Northwest the first emergence was recorded on May 6 in Washington State and on May 8 in southern Idaho.

The eastern tent caterpillar is quite generally abundant along the Atlantic seaboard southward to Maryland.

The aphid situation in the eastern fruit belt from New York to Virginia is not unusual. However, at Fort Valley, Ga., the apple aphid is appearing in large numbers.

The oriental fruit moth started emerging in Delaware April 5 and during the last week in the month was emerging in large numbers. In Georgia larvae appeared in twigs by the middle of May. This is the latest appearance of first-brood larvae since the insect became established in that State. In the East Central States it seems to be increasing in numbers, and is for the first time generally distributed over northwestern Arkansas.

The plum curculio is reported as a week later than last year in the north-central section of Georgia. Full-grown larvae were leaving the drops by the middle of the month. The insect is apparently but moderately abundant over the East Central States and somewhat more abundant than usual in Kentucky, Missouri, Arkansas, and Mississippi.

During the month the vegetable weevil was discovered in Atlanta, Ga., the easternmost record for the distribution of this insect. It was also reported from 8 additional counties in Mississippi, which State is now entirely infested except the northernmost tier of counties.

The seed corn maggot was reported as doing some damage along the Atlantic seaboard from South Carolina to Maryland.

Onion thrips were causing very severe injury to a large variety of truck crops in the important commercial trucking sections of eastern South Carolina.

By the middle of the month the Mexican bean beetle started to appear in the fields in the Middle Atlantic States. In North Carolina this insect is already doing considerable damage.

The bean leaf beetle appeared in destructive numbers in the South Atlantic, East Central, and lower Mississippi Valley States.

Brood VI of the periodical cicada started to appear during the last week in May in the District of Columbia and in near-by Maryland and Virginia, and in Adams County, Pa. Emergence in large numbers was recorded at this time from western South Carolina.

The larch case bearer is reported as very prevalent throughout the New England States and in southern Pennsylvania.

The black widow spider has been found in rather large numbers in eastern Maryland during the late winter and early spring months.

The Argentine ant was recorded as having successfully overwintered outside of greenhouses in Baltimore, Md. This is the northernmost record for establishment of this pest out of doors.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Michigan R. Hutson (May 20): First-stage nymphs were first seen today in Benzie County. In the northern half of lower peninsula they are numerous.
- Minnesota A. G. Ruggles (May 21): Grasshoppers are very abundant. They started hatching May 13 all over the State. All eggs examined seemed healthy.
- North Dakota J. A. Munro (May 23): The general hatch appears to be well under way in a number of North Dakota counties. Newly hatched nymphs were first observed May 13 at Fargo. In most cases the hoppers had already moved into the fields for several rods and destroyed a large portion of crops in Cass County on May 23. Melanoplus bivittatus Say was the predominating species.
- South Dakota H. C. Severin (May 9): Eggs of M. bivittatus began to hatch in open fields May 4 and on the south side of buildings, banks, etc., they began to hatch several weeks ago. (May 21): The situation is getting serious.
- Iowa C. J. Drake (May 15): Grasshoppers are beginning to hatch in moderately large numbers.
- Missouri F. D. Butcher (May 11, 12, 13): Young grasshoppers, apparently in the first and second instars, were observed in Butler, Ripley, and Perry Counties.
- Nebraska O. S. Bare (May 6): Grasshoppers were found hatching in Antelope County on May 3.
- Kansas H. R. Bryson (May 27): Correspondence reports indicate that large numbers of grasshoppers have been hatching in the vicinities of Alden and Bazaar.
- Oklahoma C. F. Stiles (May 23): Grasshoppers are abundant in the southwestern part of the State; they are being reported in large numbers from Love, Jefferson, and Cotton Counties, and a few farmers have already begun poisoning.
- Texas F. L. Thomas (May 23): Grasshoppers are reported abundant in many sections of the State. Reports of their occurrence in threatening numbers come from 33 counties scattered from the eastern to the western borders. "Thicker than in last twenty years in Hall County."
- Montana A. L. Strand (May 20): Grasshoppers are reported to be hatching in some counties.

- Wyoming A. G. Stephens (May 20): Grasshoppers are moderately abundant in the east and southeast.
- Colorado G. M. List (May 24): Grasshoppers are moderately to very abundant. Hatching began about May 1. About at height now. Situation probably not so bad as last year.
- Idaho C. Wakeland (May 21): We are just beginning to receive reports on grasshoppers. The season is later than usual, with very much more precipitation than normal, so that hatching has been delayed. Eggs are beginning to hatch in the Lewiston district; and we have reports also of hatching from Cassia County. We expect rather severe injury in a few districts of the State, namely, Cassia and Bingham Counties.
- Nevada G. G. Schweis (May 21): Grasshoppers of various species have been reported in large numbers from three counties of western Nevada. These hoppers have just hatched or are still in the process. Considerable poisoned-bran bait is being used, with success.
- Utah G. F. Knowlton (May): Eggs began to hatch in the vicinity of Logan during the last few days in April. In early May hatching was quite general in Tooele County and northern Utah. By the middle of the month the young hoppers were being reported from Miller County as becoming abundant, and toward the end of the month they were being very generally reported from the entire northern part of the State. (Abstract, J.A.H.)

CUTWORMS (Noctuidae)

- Maryland E. N. Cory (May 13): Truckers report an unusual abundance of cutworms.
- South Carolina A. Lutken (April 28): Cutworms are general and very abundant.
- Ohio T. H. Parks (May 25): Cutworms (Nephelodes emmedonia Cram.) are very abundant. They destroyed about 3 acres of bluegrass in a pasture in Harrison County. The weather is very dry. A disease is killing many of the worms. Climbing cutworm injury to apple trees was reported from Erie, Columbiana, and Mahoning Counties.
- Illinois J. H. Bigger (May): Variegated cutworms (Lycophotia margaritosa saucia Hbn.) were reported in considerable numbers from April 25 to May 10, in western Illinois.
- Kentucky W. A. Price (April 23): The bristly cutworm (Polia renigera Steph.) and the clay-backed cutworm (Feltia gladiatoria Morr.) have been reported from several sections of the State, where they have caused much damage to grass, clover, alfalfa, and tobacco in the bed.

- Michigan R. Hutson (May 21): Several species of climbing cutworms, chiefly Rhynchagrotis alternata Grote, are numerous on fruit trees generally in the western half of the State.
- North Dakota J. A. Munro (May 23): Several reports of cutworm injury have been received from Dunn and other western counties. So far the worms have not caused any widespread injury, but the prospects are that they will prove very destructive.
- South Dakota H. C. Severin (May 20): The western army cutworm (Chorizagrotis auxiliaris Grote) is very abundant in central and western South Dakota and has taken entire fields of small grain. It has also destroyed numerous gardens and fields of potatoes.
- Minnesota A. G. Ruggles and assistants (May): Although cutworms are quite generally reported, they are not unusually abundant over any considerable part of the State. (Abstract, J.A.H.)
- Iowa C. N. Ainslie (May 26): There is much complaint throughout northwestern Iowa of injury to gardens by cutworms that appear to be unusually numerous this spring.
- Kansas H. B. Hungerford (May 23): Cutworms are very abundant.
- Missouri A. F. Satterthwait (May 9): There seem to be many cutworms in my garden at Webster Groves. Nearly all appear to be Feltia gladiaria Morr.
- L. Haseman (May 21): I have received only a few complaints on cutworms but they are still at work, May 20.
- Alabama J. M. Robinson (May 20): Cutworms are very abundant at Ozark, affecting several thousand acres of field crops.
- Mississippi C. Lyle and assistants (May): Cutworms are not unusually abundant over the greater part of the State this spring. Reports of some damage to newly set tomatoes have been received from Lamar, Alcorn, and Lee Counties. (Abstract, J.A.H.)
- Colorado G. M. List (May 24): The army cutworm is moderately abundant in a number of sections in the State. In some fields it is doing damage to alfalfa and moving out into beet fields and other cultivated crops.
- Utah G. F. Knowlton (April 26): Cutworms are seriously damaging several hundred acres of alfalfa in Delta, Oasis, Woodrow, Oak City, and Hinckley sections of Milford County. Approximately one hundred acres of dry-farm wheat are reported as being seriously damaged at Oak City. Cutworms are damaging alfalfa in the West Mountain district of Utah County, and garden crops

in the Provo area. (April 28): Cutworms are seriously damaging pastures in the Hopper, Roy, and West Weber areas of Weber County. Alfalfa is damaged to a less extent in the same areas.

Texas

F. L. Thomas (April 21): Prodenia ornithogalli Guen. is more abundant than usual in Calhoun and Brazos Counties, possibly because cotton is very much later than usual. (May 23): C. auxiliaris, or a very closely related species, has been so abundant at Lubbock and Big Spring the past three weeks that the adults have been very annoying to persons in houses.

Nevada

G. G. Schweis (May 21): Cutworms are very abundant in Fallon and Reno. They did heavy damage on early alfalfa.

Wyoming

A. G. Stephens (May 20): Army cutworms are very abundant in northeastern Wyoming, and there have been heavy infestations in Crook, Campbell, and Sheridan Counties.

Montana

A. L. Strand (May 20): The army cutworm did heavy damage during April and May in parts of the State which received fall rains in 1931. Most of this damage was in winter wheat and was not prevalent in the southeastern tier of counties. The predicted outbreak of the pale western cutworm (Porosagrotis orthogonia Morr.) has occurred, although it is not so wide spread as indicated by our forecast. Several hundred acres of fall and spring wheat have been destroyed in Gallatin County alone.

Washington

E. J. Newcomer (May 20): Cutworms (Euxoa sp., Feltia ducens Walk., and Eriopyga sp.) are making more trouble than usual, especially to gardens.

SALT-MARSH CATERPILLAR (Estigmene acrea Drury)

Louisiana

W. E. Hinds (May 26): Salt-marsh caterpillars have been quite abundant through the early spring but are generally rather heavily parasitized and will probably not be destructive in the second generation.

Texas

F. L. Thomas (May 23): The salt-marsh caterpillar was reported from seven counties of northeastern Texas and from two counties in the southern portion.

Correction: The note on Estigmene acrea Drury by J. R. Watson, page 84, Insect Pest Survey Bulletin, has been corrected. Specimens were bred and identified as Apantesis phyllira Drury.

Missouri

F. D. Butcher (May 12 - 13 & 16): Wheat fields examined in Boone, Warren, St. Charles, St. Louis, and Perry Counties were generally infested. Almost every stool had tillers infested; from 25 per cent to 90 per cent of straws were infested with from 1 to 18 maggots or flaxseeds.

L. Haseman (May 20): The Hessian fly situation is alarming; some spring-brood larvae are entering the flaxseed stage.

Kansas

H. R. Bryson (May 27): A heavy infestation is developing in fields in the vicinity of Manhattan as reported May 25. Some fields have been plowed up. The first flaxseeds of the first spring generation were seen May 3. The first eggs of the second spring generation were seen in the field May 17. Infestations have been reported from Rooks and Ellis Counties.

Oregon

M. M. Reeher (May 1): First eggs of the spring brood were found on April 1 in Washington County.

WHEAT STRAW WORM (Harmolita grandis Riley)

Kansas

H. R. Bryson (May 27): Adults of the second generation were seen in the field May 7. They are not yet abundant at Manhattan. A heavy first generation infestation is reported at Hays.

CHINCH BUG (Blissus leucopterus Say)

Illinois

W. P. Flint (May 20): Mr. Chandler reports infestation in some areas evidently reduced by rains earlier in the season. Considerable numbers of adults were killed by cold, beating rains the first of May, but not enough to reduce greatly the threatening infestation.

South Dakota

H. C. Severin (May 20): We have received a few complaints from Douglas and Charles Mix Counties regarding increasing numbers of chinch bugs, but no serious damage is expected.

Iowa

H. E. Jaques (May): Chinch bugs were reported as very abundant in Des Moines County.

Missouri

L. Haseman (May 21): Chinch bugs are very abundant in wheat and oats in a belt across the central part of the State. Adults taken mating May 8-10 oviposited in the laboratory and eggs hatched May 20.

GREEN BUG (Toxoptera graminum Rond.)

Pennsylvania

J. S. Pinckney and E. J. Udine (May 23): An infested field of timothy at Carlisle came to our attention May 9. Characteristic dead spots varying in diameter from a foot or two to 60 feet occurred. About one-third of the field was killed. We had

earlier noticed the green bug in limited numbers in wheat on this farm, but the wheat was not injured. Most of the damage to timothy occurred before May 9; at that time parasites were at work and winged aphids were developing. At this writing, May 23, the infestation is on the wane. (Det. F. M. Wadley.)

Missouri

L. Haseman (May 2): The county agent in Vernon County and Extension Entomologist Jones report injury to wheat and oats. Some fields are reported practically ruined in these counties. Samples from Scott County show an excessively heavy percentage of parasitism. (May 21): Only a few additional complaints on the green bug have been received this month from west-central Missouri.

Mississippi

G. I. Worthington (May): A general infestation of spring oats was observed in Bolivar County. Severe damage in local areas in fields. Lady beetles and larvae present in small numbers and feeding on aphids April 18.

ARMYWORM (Cirphis unipuncta Haw.)

Indiana

J. J. Davis (May 26): Armyworm moths were common at lights at Lafayette May 1. A student reported finding several moths several nights previous.

Mississippi

G. I. Worthington (May): The armyworm appeared in oats in Washington County at Estill May 1, seriously damaging about 100 acres of a 250-acre field. Caterpillars began to pupate May 6.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

North Carolina

W. A. Thomas (May 5): The leaf-footed plant bug has been very abundant during the past few weeks on wheat in the blooming stage at Chadbourn. The heads are dotted with these insects, which seem to be feeding on the developing grains within the heads.

CORN

CORN EAR WORM (Heliothis obsoleta Fab.)

Mississippi

C. Lyle and assistants (May): The corn ear worm is appearing in moderate numbers on early corn in the southern half of the State. (Abstract, J.A.H.)

Texas

F. L. Thomas (April 19): Approximately 75 per cent of tomato plants are infested with young larvae in Jefferson County.

SOD WEBWORMS (Crambus spp.)

Pennsylvania

H. E. Hodgkiss (May 27): Sod webworms are abundant in some localities in the central and eastern part of the state, where it is causing some trouble.

ALFALFA WEBWORM (Loxostege commixtalis Walk.)

Colorado

G. M. List (May 24): The moths of what is known locally as the alfalfa webworm, have been very numerous this spring. They first made their appearance about the first of May and are still so numerous that many reports from motorists likened it to driving through a snow storm. The stores were reported to have closed in one town because of the large numbers being attracted to lights. The larvae are beginning to do considerable damage to alfalfa. Some new plantings are badly damaged at this early date and eggs are quite numerous on a variety of plants.

Wyoming

C. L. Corkins (May 17): In fifteen years of experience in this region I have never seen the moths of the sugar beet webworm so abundant and so generally distributed as they are this year. They are simply everywhere in swarms over the eastern section of Wyoming.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana

W. E. Hinds (May 26): The borer is abundant in some fields of most advanced corn especially in south Louisiana. The first generation began pupation about May 20. Infestation is somewhat lighter and development somewhat less advanced in Baton Rouge area. Borer egg parasitization by Trichogramma found first in garden corn in extreme south Louisiana at Bayou Salle on May 14, but natural parasitization in first generation eggs is extremely light, as usual.

SUGARCANE BEETLE (Euethcola rugiceps Lec.)

Louisiana

W. A. Douglas (April 28): The sugarcane beetle is very abundant in rice fields which have not been flooded. The average amount of injury was 21.5 per cent.

J. W. Ingram and E. K. Bynum (May 1): Injury to sugarcane showed a marked increase during the month; it was heaviest in the section around Franklin. In one field of plant cane 15 per cent of the shoots had been killed on April 11. Another dead-shoot count was made in this field on the 28th. It was found that 21 per cent of the remaining shoots had been killed.

Louisiana

W. E. Hinds (May 26): Damage to corn and cane has been reported as unusually severe and in many cases complaints have come from points entirely outside of the sugarcane belt. Rice has suffered also in some localities. Oviposition appears now to be about completed and adults are dying off. In northern Louisiana the damage has been inflicted in low moist areas especially, not on hills.

Texas

F. L. Thomas (May 1): Abundant on corn at Westfield.

F R U I T I N S E C T S

TARNISHED PLANT BUG (Lygus pratensis L.)

- Maine C. R. Phipps (May 23): This insect is reported in unusual abundance in Aroostook County.
- New York N. Y. State Coll. Agr., Weekly News Letter (May): The tarnished plant bug began to appear during the third week in April and by the first week in May was reported as more numerous than usual in the eastern half of the State (Abstract, J.A.H.)
- Georgia W. H. Clarke (May 9): Considerable injury is being done to Elberta peaches at Madison. In an adjoining orchard of Georgia Belle practically no injury was found, although the insect was present in large numbers on a cover crop of Austrian winter peas.
- Washington E. J. Newcomer (May 20): At Yakima little additional injury has occurred to pear since the trees bloomed, most of it having been to the fruit buds. The first eggs were laid about April 1 and began hatching about April 23. The first adults from these eggs were taken May 17.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

- Delaware L. A. Stearns (May 23): There was 100 per cent pupation by May 19. The first moth was observed May 4. Emergence is heavy at present.
- Pennsylvania H. N. Worthley (May 23): Emergence began May 19 at State College, and at Biglerville on May 11.
- H. E. Hodgkiss (May 27): Codling moth emerged in traps in Adams County May 14 and on May 18 about 18 per cent of the trap adults had emerged. Egg-laying was reported to me on May 24, which is the first record for the season.
- South Carolina A. Lutken (April 28): Eggs are numerous in apple orchards.
- Georgia C. H. Alden (May 20): This insect is moderately abundant at Cornelia. First-brood worms are entering the fruit, the first one May 9.
- Ohio J. S. Houser (May 26): Adults are emerging in large numbers at Wooster.
- T. H. Parks (May 24): Adults began to emerge at Ironton May 6. They have emerged daily since and eggs are being laid.

The cover spray was recommended to be applied beginning May 27. The moths began to emerge at Columbus and Wooster during the week of May 15. Only a small part of the brood has emerged up to this time at Columbus. Moths commenced to emerge near Toledo on May 24.

Indiana

J. J. Davis (May 26): Adults first emerged at Bedford, May 6, the first eggs May 9, but because of cool weather none had hatched by May 21, but were ready to hatch. At Lafayette the first moths were observed May 20.

Illinois

W. P. Flint (May 20): Southern Illinois--Emergence in cages at Carbondale started on April 22, continued slowly on account of cool weather, and began in earnest on May 3, with considerable numbers every day since, except for a few cool days. No infestation in apple has yet been observed. Emergence is about at the peak in central Illinois. Pupation is about two-thirds completed in northern Illinois, but there has been no emergence. The peak of the hatch of first-brood larvae will occur in southern Illinois about May 18 to 20 and in central Illinois about May 23 to 24.

Kentucky

W. A. Price (April 23): Dr. Eddy reports the emergence of the codling moth on April 23 at Paducah. Pupation was proceeding at a fairly rapid rate on April 30.

Minnesota

A. G. Ruggles (May): This insect seems to be somewhat abundant in Lyon and Lac Qui Parle Counties. (Abstract, J.A.H.)

Missouri

L. Haseman (May 21): Moths began to emerge about a week earlier than in 1931, but the recent cool spell has checked them somewhat. In southern Missouri the first moths emerged April 23 and at some of the breeding stations practically all the moths of the spring or first brood have now (May 20) emerged. In central Missouri the first emergence occurred on May 4 and we are now, May 20, nearing a peak of emergence. In northern Missouri breeding stations, moths began to appear May 9 to 13 and they are now emerging in goodly numbers. Bait-pan catches show that the caged moths and those in the orchard are emerging together.

Colorado

G. M. List (May 24): The codling moth came through the winter with very little mortality and is appearing somewhat earlier than usual in the western part of the State. At Grand Junction Mr. L. G. Davis caught 1,604 moths in 25 "hootch" traps during the night of May 15.

Idaho

C. Wakeland (May 21): Activity is somewhat delayed this season. The first emergence in the Lewiston district occurred on May 8 and dates in the southwestern districts were approximately the same. Mortality of overwintering larvae is extremely light; and following the heavy infestation from last year severe damage is expected this season.

Washington

E. J. Newcomer (May 20): Moths began emerging in some numbers May 6 and owing to continued warm weather a heavy emergence has occurred at Yakima since that date. During the period May 6 to 18, inclusive, 1,579 moths were captured in 5 baits, as compared with 1,189 moths during the same period in 1931 in the same 5 baits.

California

G. S. Hensill (April 26): The codling moth is moderately abundant at San Jose, first-brood adults appearing in sufficient numbers to necessitate applications of calyx and first cover sprays.

Monthly News Letter, Los Angeles County Agricultural Commissioner (April 28): In Los Angeles County the first emergence of the moth was noticed about April 18.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Maine

H. B. Peirson (May): Eastern tent caterpillars were observed May 4, and very generally in the vicinity of Augusta.

C. R. Phipps (May 23): This insect is very abundant; tents are numerous on wild cherry and apple.

New Hampshire

J. G. Conklin (May 24): The eastern tent caterpillar is very abundant in the southern and eastern parts of the State. Hatching began April 21 in Durham.

Vermont

H. L. Bailey (May 24): The eastern tent caterpillar, although only moderately abundant, is more plentiful in most parts of Vermont than it has been the case for several years.

Massachusetts

A. I. Bourne (May 24): Apple tent caterpillars were found hatching at Amherst and Waltham on or about April 26 to 28, which is a rather late date. They have been comparatively scarce throughout this immediate region. At the present time it is very seldom found at all prevalent in commercial orchards. Throughout the eastern and southeastern parts of the State, however, along the roadsides, there is plenty of evidence of continued abundance of these insects.

Connecticut

W. E. Britton (May 20): This insect is more abundant than it was last year. Is on the increase.

New York

N. Y. State Coll. Agr., Weekly News Letter (May): The eastern tent caterpillar is very abundant on roadside trees and in unsprayed orchards. (Abstract, J.A.H.)

New Jersey

M. Connor (May 21): Swamps are full of tent caterpillars.

Pennsylvania C. A. Thomas (May 20): Tent caterpillars are very abundant in southeastern Pennsylvania. At the present time they are three-quarters to nearly full grown. They have defoliated many wild cherry trees and quite a lot of uncared-for small apple trees.

Delaware L. A. Stearns (May 23): The eastern tent caterpillar is very abundant and destructive to roadside cherries, etc., especially in New Castle County.

Maryland E. N. Cory (May 17): The eastern tent caterpillars are very abundant.

F. Bauer (May 9): Many wild cherry trees are completely defoliated and webs are abundant on apple trees near Southaven, about 3 miles south of Annapolis, on South River.

Illinois W. P. Flint (May 20): Eastern tent caterpillars were observed by Mr. Sazama abundant at Parkersburg and also quite abundant in Marion and Effingham Counties.

CASE BEARERS (Coleophora spp.)

New York N. Y. State Coll. Agr., Weekly News Letter (May): Both species of case bearers were observed during the last week in April, and by early May they were becoming conspicuous. By the end of the month they were causing injury in scattered orchards. (Abstract, J.A.H.)

Pennsylvania H. N. Worthley (May 23): The pistol case bearer (C. malivorella Riley) is abundant in some orchards in southern Franklin County.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

New York N. Y. State Coll. Agr., Weekly News Letter (May): Leaf rollers began hatching during the first week in May in the lower Hudson River Valley. By the middle of the month they were hatching in central New York and during the third week in the month they were reported from the lake fruit belt. This insect seems to be more abundant than usual this year. (Abstract, J.A.H.)

Ohio E. W. Mendenhall (May 18): I find some apple leaf rollers on apple trees in home orchards at New Carlisle.

California G. S. Hensill (May 13): Adults of the fruit tree leaf roller are appearing in large numbers in codling moth bait traps in San Jose.

EYE-SPOTTED BUDMOTH (Spilonota ocellana Schiff.)

New York N. Y. State Coll. Agr., Weekly News Letter (May): The bud-moth was reported as very active in the lower Hudson River Valley during the first week in the month; and they were starting to appear in the lake fruit belt at about the same time. By the

middle of the month they were causing considerably more injury than last year in the Hudson River Valley. (Abstract, J.A.H.)

APHIDS (Aphidae)

Maine C. R. Phipps (May 23): Fruit aphids are very abundant in southern Maine. Reported in considerable abundance on apple.

Wisconsin E. L. Chambers (May 25): Aphids are very abundant all over the southern counties.

Arkansas D. Isely (May 21): Fruit aphids are very abundant in Benton and Washington Counties. Most serious outbreak since 1922.

APPLE GRAIN APHID (Rhopalosiphum prunifoliae Fitch)

New York N. Y. State Coll. Agr., Weekly News Letter (May): This species was by far the most plentiful in both the eastern and western sections during the early part of the month. Late in the month the second-generation winged forms were observed, by the middle of the month in the Hudson River Valley, and during the third week in the month in the western half of the State. (Abstract, J.A.H.)

Virginia L. R. Cagle (May 25): Grain aphids are scarce at Roanoke.

APPLE APHID (Aphis pomi DeG.)

Massachusetts A. I. Bourne (May 24): Green apple aphids are reported in considerable abundance in orchards throughout the State. There appears to be a fairly heavy infestation, generally.

Georgia O. I. Snapp (May 23): The infestation on apple trees at Fort Valley is one of the heaviest I have observed. Practically all of the leaves of young trees have rolled as a result of the infestation.

ROSY APPLE APHID (Anuraphis roseus Baker)

New York N. Y. State Coll. Agr., Weekly News Letter (May): During the first week in May heavy infestations were observed in Yates, Ontario, Erie, Niagara, and other lake counties. During that week in the Hudson River Valley they were present but doing no commercial damage. A rainy period early in the month materially checked these insects throughout the State. By the middle of the month they were again on the increase, and by the third week in the month were threatening to do some damage in the western part of the State. (Abstract, J.A.H.)

Pennsylvania J. R. Stear (May 24): Rosy aphids are very abundant at Ligonier this spring, due, I think, to the rather dry season.

Delaware L. A. Stearns (May 23): Infestation throughout the State is light to date and very spotty.

- Missouri L. Haseman (May 21): Rosy apple aphids are causing some damage in southwestern Missouri. They have not been observed at Columbia.
- Oregon D. C. Mote (April 21): Rosy aphids are very abundant in the Willamette Valley, curling the leaves.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

- Washington E. J. Newcomer (May 20): In spite of a minimum temperature of -30° F. during the winter, many woolly aphids survived on the trees and are getting an early start. However, the heavy infestation last fall resulted in the production of large numbers of predators, and these have come through the winter well and are very noticeable at the present time. Lacewing flies are especially numerous.

APPLE REDBUGS (Lygaeidae)

- New York N. Y. State Coll. Agr., Weekly News Letter (May): Lygidea mendax Reut. and Heterocordylus malinus Reut. were observed hatching during the second week in May in the lower Hudson River Valley. By the third week in the month they were appearing in the lake region. This pest appears to be more plentiful this year than last in the Hudson River Valley. (Abstract, J.A.H.)
- Pennsylvania H. E. Hodgkiss (May 27): Apple redbugs are of local importance following a severe outbreak of last year. They have almost entirely disappeared from orchards in the south-central section of Pennsylvania.

LEAFHOPPERS (Cicadellidae)

- Connecticut P. German (May 20-24): The white apple leafhopper (Typhlocyba pomaria McAtee, is generally slow in appearing in many orchards in New Haven and Hartford Counties. The peak of emergence had not yet been reached on May 20. Reported as abundant in some orchards in Windham County.
- New York N. Y. State Coll. Agr., Weekly News Letter (May): By the middle of the month, apple leafhoppers (T. pomaria) began to appear in the orchards in the Hudson River Valley, and by the end of the month they were quite abundant in that section.
- Delaware L. A. Stearns (May 23): Overwintered adults are generally abundant. First nymphs were observed May 19 at Bridgeville.
- Maryland E. N. Cory (May 17): Apple leafhoppers are very abundant.

APPLE CURCULIO (Tachyoterellus quadrigibbus Say)

New York

N. Y. State Coll. Agr., Weekly News Letter (May): Adults were found emerging in hibernation cages on May 10; by May 13 they were coming out in numbers and continued to do so during the remainder of the month. (Abstract, J.A.H.)

Kansas

H. R. Bryson (May 27): This insect is very abundant in apple orchards in Doniphan County, and is causing considerable injury to the young apples and fruit spurs.

FLAT-HEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Pennsylvania

J. N. Knull (May 15): The first adults were observed in Fulton County on May 15. Many maple trees throughout the State which suffered with sun scald during the summer of 1930 were infested with this borer in the areas injured by the sun.

Georgia

O. I. Snapp (May 13): An unusually heavy infestation has developed in devitalized portions of peach trees interplanted in a pecan orchard at Albany. The adults from these peach trees are causing serious damage to pecan twigs just below the new growth.

Tennessee

H. G. Butler (May 9): Adults were observed to be rather common in peach orchards in the vicinity of Harriman last spring (1931). The first to be observed this spring (1932) was taken on May 6.

Mississippi

D. W. Grimes (May): The flat-headed apple tree borer is moderately abundant on pecan at Durant.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Ohio

J. S. Houser (May 26): Practically all overwintering beetles have died around Jackson and Chillicothe. This insect for the most part is in the mature larval and pupal condition in the leaves. Young trees growing near old orchards severely damaged.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Wisconsin

E. L. Chambers (May 25): Shot-hole borers are becoming very abundant in many neglected farm orchards throughout the southern part of the State.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Massachusetts

A. I. Bourne (May 24): The European red mite was found to be hatching near Amherst on the 9th of May. On the warm days immediately following that date they appeared in large numbers.

New York

N. Y. State Coll. Agr., Weekly News Letter (May): The European red mite was reported as quite generally abundant over the eastern and central part of the State. (Abstract, J.A.H.)

PEACH

PEACH BORER (Aegeria exitiosa Say)

Tennessee H. G. Butler (May 9): Larvae were observed to have left the trees and constructed cocoons in the soil on May 3 at Harriman. (May 25): Larvae collected in cocoons on May 10 were in the pupal stage May 25. Moth emergence has not yet been noted.

Virginia H. G. Walker (May 26): The peach borer is very abundant.

PEACH TWIG BORER (Anarsia lineatella Zell.)

Kentucky W. A. Price (April 23): Injured twigs were received from Clay on April 26. Reports from Western Kentucky indicate that this injury is quite common.

Missouri L. Haseman (May 2): There is an unusually heavy twig injury due to the common peach twig borer in Boone, Cole, and other central Missouri peach orchards.

Utah G. F. Knowlton (May 11): Peach twig borers are damaging to many orchards in Utah County.

Washington E. J. Newcomer (May 20): More inquiries have come in regarding this insect than ever before around Yakima.

R. L. Webster (April 27): Peach trees have been severely injured at Clarkston.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)*

Delaware L. A. Stearns (May 23): One hundred per cent pupation by May 11; first larvae, May 11; first moths, April 5; heavy emergence about April 25 and May 5.

Virginia L. R. Cagle (May 25): The oriental fruit moth is moderately abundant at Roanoke ~~and~~ somewhat more abundant than at any time last year.

South Carolina A. Lutken (April 28): The oriental fruit moth is moderately abundant in Pickens and Oconee Counties; there is considerable twig injury.

Georgia C. H. Alden (May 20): The oriental fruit moth is moderately abundant at Cornelia. First brood moderately abundant in twigs. A few found in peaches.

- O. I. Snapp (May 17): The first twig injury of the season at Fort Valley was observed today. The larvae were 3 or 4 days old. This is the latest appearance of first-brood larvae at this point since the insect became established in Georgia. The first twig injury last year was observed on April 22. The dates of first twig injury of the other years are: April 29, 1930; April 4, 1929; April 25, 1928; April 1, 1927; April 20, 1926; April 10, 1925. At least one brood less than usual is anticipated this year. The insect is of only secondary importance in this part of the Georgia peach belt.
- W. H. Clarke (April 29): The first twig injury of the season was found today (April 29) in an abandoned orchard at The Rock, Upson County. This orchard has a number of late peaches and apple trees which permitted a late brood to develop last year.
- Ohio T. H. Parks (May 24): The oriental fruit moth is very abundant. Injury to peach terminals is very prominent in Lawrence County. Many of the larvae were full grown and had left the twigs on May 20.
- Illinois W. P. Flint (May 20): The oriental fruit moth is much more abundant in southern Illinois than was the case last year. Apparently the first-brood larvae are nearly all mature. A large number of larvae were observed in peach fruit at Centralia on May 19. This is unusual for this time of the year.
- Tennessee H. G. Butler (May 25): A heavier initial infestation is present than in the previous seasons. It is regarded as significant that the twig collections were for the most part obtained from orchards in which clean-up measures were not employed last fall, and opportunity was afforded for late fruit-infesting larvae to complete their development and hibernate in the orchards. (May 28): Young larvae were found in peach twigs today at Harriman. This is the earliest date on which I have found them in this vicinity.
- Arkansas D. Isely (May 21): Larvae are moderately abundant in a number of orchards in Benton and Washington Counties, occurring practically wherever there are mixed plantings of peaches and apples. This marks the first general infestation in north-western Arkansas.

*Correction: The note under oriental fruit moth, by C. F. Fluke, on page 94 of the May 1 issue of the Insect Pest Survey Bulletin, referred to the codling moth (Carpocapsa pomonella L.)

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

- Delaware L. A. Stearns (May 23): The peak of emergence from hibernation occurred from May 4 to 11. The insect was reported as injuring pear at Bridgeville.
- New York N. Y. State Coll. of Agr., Weekly News Letter (May): The first adult was observed in the field on May 11 in the Hudson River Valley. By the middle of the month they were emerging in numbers, though not unusually abundant. (Abstract, J.A.H.)
- South Carolina W. C. Nettles (April 28): During the week prior to April 11 one curculio was jarred from the trees. On April 11 trees were jarred and two captured from peach and plum trees.
- Georgia O. I. Snapp (May 14): Full-grown larvae began to leave peach drops at Fort Valley today. This is a week later than last year and seventeen days later than in 1930, when only one brood occurred. The present stage of development of peaches is about a month later than normal.
- W. H. Clark (April 29): In a mixed peach, apple, and plum orchard at The Rock, Upson Co., a heavy infestation was observed. Practically all peaches showed feeding and egg punctures, and in some fruits half-grown larvae were found. This orchard has received no attention this season.
- Illinois W. P. Flint (May 20): Mr. Chandler reports plum curculio infestation very light on apple this year. Owing to the shortage of the peach crop the insect is more abundant on the few peaches remaining on the trees. The injury has been done chiefly since the warm days starting May 3.
- Kentucky C. O. Eddy (May): Evidence this year shows that the curculio is much more abundant than during 1931.
- Tennessee H. G. Butler (May 25): Eggs were found in stock jars at the insectary at Harriman on May 5. The first mature larvae left fallen fruit May 18. This is four days earlier than larvae were found in 1931.
- Missouri L. Haseman (May 20): Very abundant and active at Columbia, causing plums to drop and larvae are feeding. Adults appeared early in May puncturing plum, cherry, and apple.
- Arkansas Wm. G. Amstein (May 2): Heavy attack on peaches in a small orchard at Hazen.
- C. L. Rodgus (May 7): I don't understand why we should have as many as ^{we} do at Nashville when there were practically no wormy peaches last year at harvest time.

Mississippi

C. Lyle and assistants (May): The plum curculio is very abundant over the greater part of the State, infesting peaches, cultivated plums, and wild plums. In Monroe County practically all peaches are damaged. (Abstract, J.A.H.)

Texas

F. L. Thomas (May 3): Infested plums were sent in by a correspondent from Wharton County.

PENTATOMID BUGS (Pentatomidae)

Pennsylvania

H. B. Hodgkiss (May 27): A species of pentatomid was discovered causing extensive injury on peaches; the type of work being very similar to that of Acrosternum hilaris Say.

Illinois

W. P. Flint (May 20): Mr. Chandler reports peach catfacing much more severe than last year, ranging from 8 to 30 per cent in southern Illinois orchards. It is probable that pentatomids did much of the injury this year.

HOODED PLANT BUG (Euthochtha galeator Fab.)

Georgia

W. H. Clarke (May 4): Injury consisted of feeding on the tender twigs, causing them to wilt and die, at Fort Valley. Adjoining peach, plum, and quince seedlings were not attacked.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

New York

N. Y. State Coll. Agr., Weekly News Letter (May): During the first week in May egg-laying increased rapidly in the lower Hudson River Valley. By the second week in the month egg-laying started in the western part of the State with nymphs becoming numerous in the Hudson River Valley. As a whole the infestation appears to be comparatively light. (Abstract, J.A.H.)

Illinois

W. P. Flint (May 20): Mr. Chandler reports the pear psylla infestation light in all sections of southern Illinois.

Michigan

R. Hutson (May 25): Second-stage nymphs observed in Berrien County on May 25.

PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York

N. Y. State Coll. Agr., Weekly News Letter (May): Pear thrips are quite numerous and occasioning some damage in the lower Hudson River Valley. (Abstract, J.A.H.)

PEAR MIDGE (Contarinia pyrivora Riley)

New York

N. Y. State Coll. Agr., Weekly News Letter (May): Pear midges were observed for the first time in the lower Hudson River Valley during the last few days of April and in western New York during the first week in May. By the end of the month injury was becoming apparent in the Hudson River Valley section. (Abstract, J.A.H.)

CHERRY

CALIFORNIA ROOT BORER (Prionus californicus Mottsch.)

Utah

G. F. Knowlton (April 28): The California prionus is seriously damaging cherry trees on several farms in Davis County.

A DASCILLID (Dascillus plumbeus Horn)

California

F. H. Wymore (April 26): This beetle was found to attack the buds and young leaves of small, recently planted cherry trees at Fairfield. As many as 10 beetles were removed from some of the small trees. Two-year-old cherry trees growing just across a small creek were not attacked.

PEACH BARK BEETLE (Phthorophloeus liminaris Harr.)

Pennsylvania

J. N. Knull and G. S. Perry (May 3): Many wild black cherry trees in the vicinity of Burning Well, Elk County, are heavily infested. The infestation occurred in the fall of 1931 and is due to an unhealthy condition of the trees. Increment borings showed slow growth for the last few years.

BLACK CHERRY APHID (Myzus cerasi Fab.)

California

E. O. Essig (May 20): Black cherry aphids are very abundant and destructive in the San Francisco Bay district.

COMMON RED SPIDER (Tetranychus telarius L.)

Idaho

C. Wakeland (May 21): May 11 no red spiders could be found emerging around the bases of cherry trees in the Lewiston district but on May 19 they were found abundantly on the lower leaves and many eggs had then been deposited. The red spider has caused extremely severe damage to cherries in this district during the past two seasons and the outlook this year is for a repetition of damage in orchards where control is not obtained early.

BUSH BERRIES

RASPBERRY FRUIT WORM (Byturus unicolor Say)

New York

N. Y. State Coll. Agr., Weekly News Letter (May): The raspberry fruit worm has been causing more injury than in several years by skeletonizing the leaves and blasting the flowers in Orange and Ulster Counties in southern New York. (Abstract, J.A.H.)

Washington

J. Wilcox and W. W. Baker (May 12): The first record we have of the adults feeding on evergreen blackberry was obtained today. The flower buds are not out yet but several specimens were seen feeding in the opening leaf buds in Puyallup. (May 12): Eggs found on thimbleberry today; the first eggs observed this season in Puyallup Valley. (May 16): Could find no eggs in either of two fields of loganberry examined in Auburn. (May 18): Eggs were found in fair numbers today in Puyallup on King raspberry. (May 20): Feeding by the adult was common on the buds of native blackcap (Rubus leucodermis) in a patch examined today in Puyallup. Only one egg was located in examining buds on several bushes though the fruits of the first blossoms are well developed.

BLACK GOOSEBERRY BORER (Xylocorius agassizi Lec.)

Washington

W. W. Baker (May 15): The first specimen of this genus I have seen from this State was beaten from a native species of gooseberry today in Mineral.

A CURCULIONID (Panscopus torpidus Lec.)

Washington

W. W. Baker (May 16): Evidence of damage to the underground portion of the new shoots was obtained today in Alderton. The adult gouges out portions of the cane from 1 to 4 inches below ground and in many cases weakens the cane so that it breaks off at about the ground level.

RASPBERRY SAWFLY (Monophadnoides rubi Harr.)

Ohio

E. W. Mendenhall (May 16): The raspberry sawfly is quite noticeable in the raspberry plantations in Fairfield County.

Iowa

H. E. Jaques (May 27): This sawfly is very abundant in our region this year. The top leaves of many of the plants in almost every raspberry patch are badly riddled. It is the first that it has come to our attention in our region.

AN APHID (Aphididae)

Washington

W. W. Baker (May 18): On May 7 several living raspberry fruit spurs were observed in Puyallup which had been injured and the growth retarded by this aphid, but at that time no nymphs were present though many cast skins were in evidence. On May 18 nymphs were abundant on many fruit spurs throughout the field. No winged forms were collected.

J. Wilcox and W. W. Baker (May 12): In five previous years in Puyallup no aphids were seen on Evergreen blackberry at this time of the year. Today many of the new shoots were heavily infested. Two growers reported aphids as abundant on their canes and aphids have been rather serious pests in past years.

ROSE SCALE (Aulacaspis rosae Bouche)

Maryland

E. N. Cory (May 13): This insect is quite prevalent in most of the raspberry plantings in Washington County.

Ohio

E. W. Mendenhall (May 18): The rose scale is quite bad on raspberry and blackberry canes in Fairfield County.

BLACK HORNED TREE CRICKET (Oecanthus nigricornis Walk.)

Maryland

E. N. Cory (May 13): Injury has been extremely serious in Washington County.

Indiana

J. J. Davis (May 26): Tree cricket eggs were reported abundant in raspberry canes from Butler April 22.

GRAPE

GRAPE FLEA BEETLE (Haltica chalybea Ill.)

Illinois

J. H. Bigger (May): Grape flea beetles are much more numerous than usual in western Illinois. On early grapes about April 23, and late grapes May 2.

Missouri

L. Haseman (May 21): Grape flea beetles are abundant over the State. Larvae half grown May 20.

A. F. Satterthwait (May 9): Unusually destructive on grape blossoms and early foliage buds at Webster Groves.

EIGHT-SPOTTED FORESTER (Alypia octomaculata Fab.)

Kansas

H. R. Bryson (May 27): Larvae have been causing considerable injury to grapes this season in Sedgwick County. They have also done some damage to grapes at Manhattan.

GRAPE BERRY MOTH (Polychrosis viteana Clem.)

Ohio

E. W. Mendenhall (May 19): There are some reports of damage to home-grown grapes at Columbus. This is the first generation which attacks and webs together grape clusters even before the blossoms open.

GRAPE LEAFHOPPER (Erythroneura comes Say)

Delaware

L. A. Stearns (May 23): The first appearance of overwintered grape leafhoppers on grape was observed May 17.

Michigan

R. Hutson (May 25): Grape leafhoppers are feeding on raspberries in Berrien County in the vicinity of vineyards sufficiently to have become noticeable.

CURRANT

IMPORTED CURRANT WORM (Pteronidea ribesii Scop.)

Missouri

L. Haseman (May 21): The imported currant worm was nearly mature May 15. It is not so abundant as usual.

CURRANT APHID (Myzus ribis L.)

Ohio

E. W. Mendenhall (May 24): The currant aphid is very bad in central Ohio on currants.

CURRANT FRUIT FLY (Epochra canadensis Loew)

Oregon

S. C. Jones (April 21): Adults began emerging on April 12 in the field.

PECAN

PECAN LEAF CASE BEARER (Acrobasis palliolella Rag.)

Georgia

J. B. Gill (May 26): Damage to buds in pecan orchards of southern Georgia has not been so severe this season as during the past two years. Occasionally, however, a badly infested pecan orchard is encountered.

Mississippi

C. Lyle and assistants (May): The pecan leaf case bearer is very abundant in the southern part of the State. (Abstract, J. A. H.)

PECAN NUT CASE BEARER (Acrobasis caryae Grote)

Mississippi

F. P. Ansler (May): The pecan nut case bearer is doing noticeable damage to early pecans around Gulfport.

TWIG GIRDLER (Oncideres cingulatus Say)

Georgia

J. B. Gill (May 26): It has been observed that the oak pruner has caused more extensive damage in the older pecan orchards of southern Georgia this spring than has been the case for many years.

A CURCULIONID (Achrastenus griscus Horn)

Texas

F. L. Thomas (April 6): The insect hollows out the buds after eating a small hole in the side of pecans in Williamson and Llano Counties.

PECAN SAWFLY (Acordulecera maura McG.)

Mississippi

J. P. Kislanko (May): The pecan sawfly infestation in Stone County is moderate in some places while heavy in others. The infestation in Forrest County is lighter in the northern part than in the southern part of the county.

CITRUS

GREEN CITRUS APHID (Aphis spiraeicola Patch)

Florida

H. T. Fernald (April 30): Citrus aphids are extremely abundant and doing much injury, particularly where there have been no recent rains.

W. W. Yothers (May 23): Citrus aphids were more abundant and injurious during March and April than at any time since 1923-1924. They were diminishing in May.

California

Monthly News Letter, Los Angeles Co. Agr. Comm. (April 28): The citrus whitefly was discovered in Pasadena and South Pasadena early in April.

CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Florida

H. T. Fernald (April 30): The rust mite has been increasing rapidly during the last ten days at Orlando.

Florida

W. W. Yothers (May 24): This insect is seriously abundant this year, but not unusual.

ORANGE THRIPS (Scirtothrips citri Moul.)

California

S. Lockwood (May 5): This insect has been collected in Butte, Yuba, Sacramento, Fresno, Tulare, San Bernardino, Riverside, and Los Angeles Counties by myself. Horton lists it in some other counties in California.

ORANGE MAGGOT, OR MEXICAN FRUIT FLY. (Anastrepha ludens Loew)

California

News Letter, Plant Quarantine and Control Administration, No. 17. (May 1): Infestations were found in 35 groves extending from San Benito to Mission during the month of March. This makes a total of 40 premises in which infestations have been found this season to the end of March. The infestations were more general in Hidalgo than in Cameron County. More groves were found infested in the Weslaco, Pharr-San Juan-Alamo, and Mission districts than in the others.

COCONUT

A SCALE (Aspidiotus orientalis cocotiphagus Marl.)

Florida

E. W. Berger and G. B. Merrill (May 24): A. orientalis cocotiphagus is very abundant on coconut palms at Miami and West Palm Beach. Reported to office by J. C. Goodwin.

TRUCK - CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

- Georgia T. O'Neill (May 23): About 30 adults and one larva were submitted with report of severe injury to an open bed of tomato plants at Atlanta. First recorded from this locality May 20.
- Louisiana W. E. Hinds (May 26): The vegetable weevil has been extremely abundant in this State, but appears now to have mostly entered aestivation.
- Mississippi M. M. High (May 16): The following additional counties in Mississippi have been found infested: Winston, Webster, Chickasaw, Calhoun, Panola, Tallahatchie, Lafayette, Lee, and Pontotoc.

FLEA BEETLES (Halticinae)

- Virginia L. D. Anderson (May 26): Potato flea beetles (Epitrix fuscula Crotch) seem to be steadily increasing in numbers each year and are causing considerable damage in Accomac and Northampton Counties.
- Maryland E. N. Cory (May 13): Truckers report an unusual abundance of flea beetles attacking most crops throughout the State.
- North Dakota J. A. Munro (May 23): Present by the thousands on radishes and onions in a garden at Carrington (Foster County). They are also abundant in the vicinity of Fargo.
- Mississippi J. P. Kislanko (May): The eggplant flea beetle, E. fuscula, infestation was rather heavy in Stone and Forrest Counties during the first part of May, eggplant leaves being severely perforated.
- Utah G. F. Knowlton (May 18): Flea beetles are damaging radishes and turnips in several parts of Tooele County. They are doing less than the usual amount of damage to sugar beets.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

- Virginia L. W. Brannon (April 29): The first adult of the 1932 season was observed feeding on beans on April 29.
- North Carolina W. A. Thomas (May 12): The larvae of this insect are frequently found either embedded or partially embedded in ripe fruit of the strawberry at Chadbourn. This seems to be true only when the berries are lying in contact with the soil.
- Georgia O. I. Snapp (April 28): Adults are abundant on peach trees at Fort Valley, feeding on the petals, calyxes, and to some extent on the green peaches.

Alabama

J. M. Robinson (May 20): The spotted cucumber beetle is very abundant at Auburn attacking corn plants.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

Oregon

T. R. Chamberlin (May 1): Numbers of adult beetles considerably less than last year. Females dissected toward the end of April, 1932, contained many eggs of all sizes. Apparently oviposition will extend later into the season than usual.

BLISTER BEETLES (Meloidae)

Florida

J. R. Watson (May 24): Blister beetles (Epicauta vittata Fab.) and (E. cinerea L. Forst.) are very common, doing most injury, as usual, to potatoes, tomatoes, peppers, and eggplant. They are also common on the wild coffee bean, Cassia tora, and are eating the blossoms (petals) of wild cactus, Opuntia.

FALSE CHINCH BUG (Nysius ericae Schill.)

North Carolina

W. A. Thomas (May 17): The false chinch bug continues to be fairly abundant on spring broccoli and other crucifers at Chadbourn.

South Carolina

W. A. Thomas (May 10): It was observed today that a weed (Gnaphalium sp.) carried a light infestation in the vicinity of Charleston.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

Maryland

E. N. Cory (May 13): The seed corn maggot has been reported as damaging 50 per cent of the present stand of peas of one of the canners in Centerville, Queen Annes County. Also injuring sprouts of cantaloupes and watermelons in that county. Two records have been received of injury to beans in fields in Worcester County. One field of 5 acres had been destroyed. We have also had several reports of injury to beans and peas in Caroline County.

Virginia

H. G. Walker (May 26): The seed corn maggot is moderately abundant at Norfolk.

South Carolina

A. Lutken (April 28): The seed corn maggot is very abundant on onions, peas, beans, and corn generally.

THRIPS (Thysanoptera)

South Carolina

W. J. Reid, jr. (April 27): Thrips, probably Thrips tabaci Lind., are much more abundant than usual on spring cabbage plantings in the Charleston area. The insects are causing a whitening and wilting of the leaves. Since the cabbage crop was set in the field in late December and January the weather

has been abnormally warm and dry. (May 12): The principal truck crops grown during this season in the Charleston area --cabbage, cucumbers, potatoes and beans--are now being seriously damaged by the heaviest infestation that local growers remember of ever witnessing, certainly the worst in the section during the past six years. At present young cucumbers appear to be suffering most from the attack. The infestation is quite general over the entire section. As many as 35 thrips have been counted in the field of a microscope, five-eighths inches on the under side of a cucumber leaf. An average of 14 thrips was found on each of 100 similar sized areas on 100 cucumber leaves. Since May 1 the insects have spread to adjacent cucumber, bean, potato, and onion plantings. The following native plants in the vicinity of truck plantings were found to be infested: Goldenrod, milkweed, smartweed, pigweed, and Johnson grass. (May 13): Thrips were found to be moderately abundant on small plantings of cucumbers and melons in the central portion of the State. (May 14): They were proving quite destructive to onions in the northern or Piedmont area of the State. The infestation continued to be severe until May 20. During the 24-hour period from 8 a. m., May 20, to 8 a. m., May 21, a rainfall of 4.34 inches fell at Charleston. The infestation on 100 leaves after the rain was found to be 70.9 per cent less than the infestation count made during a period of 3 days before the rain.

W. A. Thomas (May 10): Thrips are causing severe injury to cabbage, cucumber, bean, Irish potato, and gladiolus in the vicinity of Charleston.

A CAMEL CRICKET (Dalmanella brevipes Hald.)

Oklahoma C. F. Stiles (May 23): A cricket is doing serious damage to garden and truck crops at Hollis* (Det. A.N.Caudell)

COMMON RED SPIDER (Tetranychus telarius L.)

Virginia H. G. Walker (May 26): The red spider is very abundant and has caused considerable damage to strawberries in the Norfolk district and on the Eastern Shore of Virginia.

Georgia O. I. Snapp (May 2): The drought has been favorable for the red spider and they are unusually abundant in Fort Valley. A field of English garden peas has been ruined. (May 14): Red spiders have caused serious damage to beans in gardens at Fort Valley.

THE GREENHOUSE CENTIPEDE (Scutigera immaculata Newp.)

California A. E. Michelbacher (May 19): This centipede continues to damage asparagus and is very destructive in greenhouses around East Oakland.

POTATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

- Delaware L. A. Stearns (May 23): The Colorado potato beetle is very abundant--there have been many complaints during the past 10 days.
- Virginia L. R. Cagle (May 25): The Colorado potato beetle is very abundant at Roanoke.
- Pennsylvania C. A. Thomas (May 20): The Colorado potato beetle is becoming very common on potato leaves, which are now up several inches in Chester County.
- J. N. Knull (May 16): Plentiful on volunteer potatoes at Mont Alto.
- Maryland E. N. Cory (May 17): The Colorado potato beetle is very abundant.
- North Carolina L. W. Brannon (May 5): Adults and eggs were numerous on Irish potatoes in this section on May 5. No hatching to date.
- South Carolina A. Lutken (April 28): Eggs deposited at Clemson College April 27.
- Ohio T. H. Parks (May 26): Adults and eggs are more abundant than usual.
- Indiana J. J. Davis (May 26): Attacking potatoes at Indianapolis as soon as the plants appear above ground.
- Illinois J. H. Bigger (May): More than commonly abundant May 18 in western Illinois.
- South Dakota H. C. Severin (May 20): First beetles were seen May 19.
- Mississippi and Alabama K. L. Cockerham (April 22): Doing considerable damage to the Irish potato crop at Biloxi, Miss., and Foley, Ala. In some small garden patches it has been necessary to treat the plants twice.
- Missouri L. Haseman (May 21): Larvae have been hatching and feeding actively for some time at Columbia. Numerous complaints have been received from throughout the State.
- Kansas H. B. Hungerford (May 8): Adults are seriously injuring potatoes at Lawrence.
- Oklahoma C. F. Stiles (May 23): Moderately abundant in central and eastern Oklahoma and scarce in the western section of the State.
- Colorado G. M. List (May 24): More numerous than usual over the eastern half of the State. Most of the early potatoes will need spraying.

Idaho C. Wakeland (May 21): Eggs were found at Lewiston on May 11 when oviposition had just begun. At this date they are still in the egg stage and eggs are extremely abundant on all early potatoes.

POTATO FLEA BEETLE (Epiditrix cucumeris Harr.)

Pennsylvania H. E. Hodgkiss (May 27): The potato flea beetle has already injured large acreages of potatoes and it is working on newly set tomato plants.

POTATO TUBER WORM (Gnorimoschema operculella Zell.)

Utah G. F. Knowlton (April 28): Dr. F. E. Stenhens reports the occurrence of the potato tuber moth in one potato field at Beryl.

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

New York N. Y. State Coll. Agr., Weekly News Letter (May 23): Found first Mexican bean beetle May 17 in Ulster County.

Pennsylvania J. N. Knull (May 16): The first adult was collected on a pine tree at Mont Alto on May 16.

Delaware L. A. Stearns (May 23): The Mexican bean beetle is now appearing on bean--first complaint received May 18.

Virginia L. W. Brannon (May 4): The first adult of the season was found feeding in the field at Norfolk on May 4. This is two days earlier than the first record of 1931.

H. G. Walker (May 26): The Mexican bean beetles are only moderately abundant this spring at Norfolk. Our hibernation records to date show that 30.07 per cent of the beetles have emerged from a cage located in a pine woods, 28.13 per cent from a cage located in a mixed oak and pine woods, and 12.47 per cent from a cage located in an oak woods. This is not so high an emergence as had occurred at this time last year.

North Carolina W. A. Thomas (May 23): Adults are very abundant on string and lima beans at Chadbourn, where considerable damage is being done. No eggs have yet been observed.

South Carolina A. Lutken (May 26): Adults and eggs taken in Anderson May 11; scarce.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

- Virginia L. W. Brannon (April 29): The first beetle of the season was found feeding at Norfolk on snap beans on April 29.
- North Carolina and South Carolina W. A. Thomas (May 7): Unusually abundant during the past few weeks, causing rather severe damage to young beans and cowpeas. The injury seems to be more widespread than usual and it has become necessary to resort to control measures in the trucking areas of the Carolinas.
- Illinois W. P. Flint (May 20): Mr. Chandler reports moderate injury, with probability of more severe injury later.
- Tennessee J. U. Gilmore (May 25): Nearly all plantings of early snap beans have been severely attacked at Clarksville.
- Arkansas D. Isely (May 21): Very abundant in Crawford, Washington, and Benton Counties.
- Alabama J. M. Robinson (May 20): Abundant at Vernon, Auburn, River-view, and Flat Creek.
- Mississippi C. Lyle and assistants (May): The bean leaf beetle has attracted more attention in Mississippi during the month than any other insect. Complaints have been received from all sections of the State. (Abstract, J.A.H.)

A THRIPS (Frankliniella tritici Fitch)

- Florida J. R. Watson (April 27): Injuring bean blossoms in the Everglades and north to Ocala.

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

- Illinois C. C. Compton (May): Moderately abundant at Blue Island, Cook County. Beginning oviposition.
- Kentucky W. A. Price (April): Butterflies were observed on April 7 at Lexington.
- South Carolina H. C. Severin (May 20): Numerous butterflies were seen on May 10.
- Minnesota A. G. Ruggles and assistants (May 13): The imported cabbage worm is very abundant in Lyon County.

Missouri

L. Haseman (May 21): Imported cabbage worms have been doing much damage on early cabbage.

DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

Virginia

T. G. and L. D. Anderson (May 26): The hymenopterous parasite Angitia hellulae Vier. (det. R. A. Cushman) has been very effective in controlling this insect. About 90 full-grown diamond-back larvae and pupae were collected in the field on April 6 and 8; over 95 per cent of these were parasitized. One hyperparasite Callitula sp. (det. C. F. W. Muesebeck) was also reared from this material at Norfolk.

Colorado

G. M. List (May 24): The diamond-back moth was found very numerous on stocks in a greenhouse at Sterling May 1. Serious damage was being done to this planting.

Utah

G. F. Knowlton (May 2): Diamond-back moths are abundant upon mustard in several parts of Box Elder and Tooele Counties.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia

L. W. Brannon (May 5): Adults were fairly numerous on scattered seed kale plants on April 28 at Norfolk. Several egg masses were seen. An egg mass which was collected on April 14 hatched in the insectary on the 25th.

Maryland

E. N. Cory (May 13): More numerous than last year in Talbot, Kent, Baltimore, and Prince Georges Counties.

North Carolina

W. A. Thomas (May 23): We are now witnessing a very definite demarcation of broods of this insect at Chadbourn. Ordinarily there is no apparent distinction between broods, both adults and nymphs being present at the same time.

Ten days ago adults were very numerous with practically no nymphs. Today the reverse is true. Few adults can be seen, while thousands of nymphs are observed on the plants, with hatching still in progress. On some plants these nymphs are so abundant as almost completely to cover the foliage and stems.

Georgia

J. B. Gill (May 26): They have been abundant all the spring on cabbage and collards at Albany.

Missouri

L. Haseman (May 21): The harlequin cabbage bug is reported as abundant on cabbage, radish, and related crops all over the State; it was laying eggs May 20.

Mississippi

C. Lyle and assistants (May): This insect is quite generally abundant and in many cases doing injury to various crucifers. (Abstract, J.A.H.)

Texas S. W. Clark (April 25): Generally distributed throughout the whole Rio Grande Valley. Late cabbage is apparently not badly affected.

CABBAGE MAGGOT (Hylemyia brassicae Bouche)

Connecticut R. B. Friend (May 23): At Mt. Carmel, Hamden, the oviposition was about a week later than normal and the infestation appears light.

New York N. Y. State Coll. Agr., Weekly News Letter (May): Cabbage maggots appeared during the third week in May in western New York, where they were laying eggs on early-set plants.

CABBAGE APHID (Brevicoryne brassicae L.)

Virginia H. G. Walker (May 26): The cabbage aphid has been abundant enough to cause some damage to the seed kale at Norfolk.

North Carolina W. A. Thomas (May 17): This insect seems to be on the increase, developing a rather heavy infestation on many of the small home garden plots of cabbage and collards. Parasitism is developing somewhat rapidly.

Indiana J. J. Davis (May 26): The cabbage aphid was abundant and destructive to cabbage at Liberty, May 21, the plants having been received from the South. Indiana growers have been having much trouble with insect-infested cabbage and tomato plants received from Southern sections for several years. A system of careful insecticide treatment and inspection is essential if Southern growers anticipate a continued northern market for their plants.

Ohio T. H. Parks (May 26): These aphids are becoming abundant on young cabbage plants in Franklin County.

Missouri L. Haseman (May 21): The cabbage aphid was serious on cabbage and radishes over the State May 10 to 15.

E. D. Butcher (May 10-17): Very generally present on cruciferous plants in St. Louis, Perry, Carter, Butler, and Ripley Counties. Hymenopterous parasites in a few gardens had materially reduced the infestations. Ladybird beetles were fairly common.

CABBAGE CURCULIO (Ceutorhynchus rapae Gyll.)

Indiana J. J. Davis (May 26): The cabbage curculio was reported destructive to hot-bed cabbage at Connersville (May 23) and Ke-wanna (May 24):

Missouri L. Haseman (May 21): The cabbage curculio was reported serious at St. Louis and St. Joseph May 10 to 15.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

- Massachusetts A. I. Bourne (May 24): Asparagus beetles appeared for the first time at Amherst on May 14, and on the 16th were observed for the first time by Professor Whitcomb at Waltham. The first asparagus beetles to appear were C. asparagi, the spotted species C. duodecimpunctata L. appearing some days later.
- Delaware L. A. Stearns (May 23): Asparagus beetles were unusually abundant and destructive throughout the State.
- New York N. Y. State Coll. Agr. (May 23): Asparagus beetles caused considerable damage during the hot weather by eating the tender tips in Chautauqua County. Little egg-laying has taken place.
- Pennsylvania C. A. Thomas (May 20): The common asparagus beetle has been abundant and destructive in some asparagus fields in southeastern Pennsylvania during the month. They have caused considerable damage by distorting a large proportion of asparagus stalks. Only occasionally were specimens of the 12-spotted asparagus beetle noticed.
- Virginia L. W. Brannon (April 27): The first adult of the season was found feeding in the field on April 27.
- Maryland E. N. Cory (May 13): Reported attacking asparagus in Baltimore and Anne Arundel Counties.
- Illinois J. H. Bigger (May): First appearance this year at Jacksonville, April 30.
- C. C. Compton (May 20): The common asparagus beetle is very abundant at Des Plaines and Blue Island. More than 50 per cent of the tips were badly damaged in several fields.
- Iowa H. E. Jaques (May 27): The common asparagus beetle which apparently made its first appearance here two years ago is now becoming quite abundant and may be found in numbers wherever asparagus is to be seen.
- California A. E. Michelbacher (May 19): Generally spread throughout the Sacramento River Delta. At the season progresses it will probably become injurious in places.

CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

- Virginia H. G. Walker (May 26): The striped and spotted cucumber beetles are much more abundant now than at this time last year, the striped cucumber beetle being especially abundant.

These beetles caused considerable damage in some fields before the growers noted their presence.

L. R. Cagle (May 25): The striped cucumber beetle is very abundant at Roanoke.

- Ohio T. H. Parks (May 24): The striped cucumber beetle was noticed moving out of hibernation in fallen leaves of a wood lot on May 7. It was taken in a light trap the week of May 16.
- Oklahoma C. F. Stiles (May 23): The striped cucumber beetle is apparent in large numbers in central and eastern Oklahoma; some of the growers have replanted their fields three times.
- Illinois C. C. Compton (May): Striped cucumber beetles are scarce on melons just planted at Des Plaines, Cook County.
- Delaware L. A. Stearns (May 23): The striped cucumber beetle is generally abundant.
- Missouri L. Haseman (May 21): Several growers have already reported trouble.
- South Dakota H. C. Severin (May 20): Striped cucumber beetles were present in southern South Dakota May 15.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

- Virginia H. G. Walker (May 26): More abundant this spring than they were last spring, at Norfolk.
- Maryland E. M. Cory (May 13): A. tristis reported general.
- Illinois C. C. Compton (May 20): Hibernating bugs are very abundant. They are just leaving hibernating quarters in northern Illinois.
- Utah G. F. Knowlton (May 18): Squash bugs are abundant at Bauer, Tooele County, and in many parts of Utah County.
- Oklahoma C. F. Stiles (May 23): Appearing in large numbers in Okmulgee County.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

- South Carolina A. Lutken (April 28): The onion thrips is very abundant and causing noticeable damage to onions in the area near Clemson College.

Mississippi

J. P. Kislanko (May): The onion thrips caused severe injury to onion plants in Wiggins. On May 9 onion foliage had the appearance of having been burned. Upon closer examination a heavy infestation of thrips was noticed.

A CAPSID (Orthotylus translucens Tuck.)

Illinois

J. H. Bigger (May 18): Onion capsids are destroying many onion patches in home gardens in Greene and Morgan Counties.

SWEET CORN

BEET ARMYWORM (Laphygma exigua Hbn.)

California

R. E. Campbell (April 15): Young sweet corn about 1 foot high is being attacked by larvae in Los Angeles County. Infestation is scattering and the corn is outgrowing the damage.

STRAWBERRY

STRAWBERRY WEEVIL (Anthonomus signatus Say)

New York

N. Y. State Coll. Agr., Weekly News Letter (May 23): Strawberry weevil injury was observed May 20 in Dutchess County.

North Carolina

W. A. Thomas (May 18): The new generation of strawberry weevils began emerging in considerable numbers today. The overwintering generation is dying off rapidly.

C. H. Brannon (April 30): Dewberries in Cumberland County are being very severely injured by attacks of the strawberry weevil.

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

North Carolina

W. A. Thomas (May 6): In examining strawberry plants set after a crop of cowpeas last summer, it was observed that the adult cowpea pod weevil occasionally was found feeding on ripe fruit. No volunteer cowpeas or other normal food plants were available at the time at Chadbourn.

A ROOT WEEVIL (Dyslobus sp.)

Oregon

D. C. Mote (April 21): Dyslobus weevils were found feeding on and defoliating gooseberry shoots, near Dallas, on March 23, (D. C. M.) Dyslobus weevils were laying eggs in field April 14 (K. W. Gray).

STRAWBERRY LEAF ROLLER (Ancylis comptana Froel.)

- Indiana J. J. Davis (May 26): Reported abundant at Elkhart, May 24.
- Michigan R. Hutson (May 9): Plentiful on strawberries in Berrien County.
- Missouri L. Haseman (May 21): Serious in southwestern Missouri. Larvae nearing maturity May 15.

STRAWBERRY CROWN MOTH (Aegeria rutilans Hy. Edw.)

- Washington R. L. Webster (April 27): A strawberry field on the college ground at Pullman has been ruined by this borer.

FLOWER THRIPS (Frankliniella tritici Fitch)

- Louisiana C. O. Hopkins and M. Allen (May 5): Present in all fields visited in the strawberry growing district of Tangipahoa Parish and seriously injuring the strawberry flowers. From 20 to 75 per cent of the blooms were being destroyed by this pest. Mr. O. G. Price, County Agent, on May 5 wrote: "This thrips is causing about 20 per cent reduction of berries in fields in St. Tammany Parish." This thrips has been unusually abundant on various flowers in the vicinity of Baton Rouge during the present season.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

- Utah G. F. Knowlton (May 18): Beet leafhoppers are present in many parts of northern Utah.
- California A. E. Michelbacher (May 19): In the area around Clarksburg some curly top of sugar beets has been noted. The number of infested beets in this area at the present time is less than 1 per cent. To date I have not observed any leafhoppers, although diseased beets would indicate that they have been in the area a month or more.

BEET WEBWORM (Loxostege sticticalis L.)

- North Dakota J. A. Munro (May 23): Adults of the sugar beet webworm have been abundant of late in the vicinity of Fargo. County agents and farmers of Ward, Williams, Divide, Hettinger, and McKenzie Counties report that the overwintering larvae have been observed unusually abundant in recently plowed fields.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

- North Carolina C. H. Brannon (April 30): Damage to tobacco beds is the worst in years all over the State.
- Ohio T. H. Parks (May 24): Flea beetles were very injurious to tobacco plants in seed beds in Lawrence County early in May.
- Kentucky T. A. Price (April 23): The tobacco flea beetle has been very troublesome in tobacco beds generally over the State.
- Tennessee J. U. Gilmore and J. Milam (May 25): Practically all fields at Clarksville this season have suffered severely from flea beetle attacks.

TOBACCO THRIPS (Frankliniella fusca Hinds)

- Florida F. S. Chamberlin (May 10): Very abundant and severe damage will result if rains do not occur in the near future.

F O R E S T A N D S H A D E - T R E E I N S E C T S

PERIODICAL CICADA (Magicicada septendecim L.)

- Pennsylvania S. W. Frost (May 25): This morning I found four newly emerged cicadas. Apparently they are quite numerous, as these were found by chance in doing other work in the orchard. The specimens I observed occurred in the northern end of Adams County.
- Maryland P. Oman (May): Found at Hyattsville (Fly Avenue); and in Washington, D. C. (35th & Van Ness, N. W.).
- J. A. Hyslop (May 22): Two newly formed pupal skins were found on a tree on my farm at Avanel today. (May 27): Several hundred pupal skins were collected from a few trees.
- F. H. Berger (May 23): Pupae have been crawling out and adults emerging since Friday, May 20, at Hyattsville.
- Virginia W. S. Fisher (May): Found at Falls Church.
- South Carolina A. Lutken (May 14): The periodical cicadas are emerging in large numbers over an area extending at least a mile north of the point where we made the collection, Walhalla and Issaquena Falls.

CANKER WORMS (Geometridae)

Wisconsin

E. L. Chambers (May 25): Eighty acres of maple and hardwoods were defoliated nearly 50 per cent and many orchards seriously damaged in unsprayed section of the State by Paleacrita vernata Peck.

Kansas

H. B. Hungerford (May 8): Both the fall canker worm (Alsophila pomataria Harr.) and the spring canker worm P. vernata) were seriously abundant at Lawrence and at Ottawa.

A TORTRICID (Homona fervidana Walk.)

Arkansas

W. J. Baerg (May 23): Caterpillars have been exceedingly numerous over a small area at Combs. Many bushes were totally covered with webs, April 24.

ASH

ASH BORER (Podosesia fraxini Luggar)

Indiana

J. J. Davis (May 26): The ash borer was reported very abundant at Anderson on 6-inch ash trees, the adults issuing May 21. Also at Muncie May 23.

North Dakota

J. A. Munro (May 23): Word from Garrison, McLean County, indicates that the ash tree borer is quite troublesome to ash plantings there.

ASH SAWFLY (Tomostethus multicoloratus Roh.)

District
of
Columbia

G. Myers (May 17): Larvae from one-half to full-grown are very abundant on ash trees along Seventh Street, south of Constitution Avenue, Washington.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

New England

E. P. Felt (May 24): Found in great numbers in attics in a number of southern New England localities.

Connecticut

W. E. Britton (May 20): Beetles very abundant, emerging from hibernating quarters.

New Hampshire

J. G. Conklin (May 24): Feeding of overwintering beetles was observed in towns of Stratham and Newfields May 17.

Rhode Island

A. E. Stene (May 25): Adults are showing up in fairly large numbers in many sections of the State.

LEOPARD MOTH (Zeuzera pyrina L.)

Massachusetts

E. P. Felt (May 24): Leopard moths are very abundant in many of the old elms on Nantucket Island.

FIR

AN APHID (Dreyfusia picea Ratz)

Maine

H. B. Peirson (May): Infestation by the fir bark louse was quite general along the coast May 19.

LARCH

LARCH CASE BEARER (Coleophora laricella Hbn.)

New England

E. P. Felt (May 24): The larch case bearer is prevalent in southern New England with a prospect of somewhat severe injury.

Maine

H. B. Peirson (May 19): Very heavy outbreaks of the larch case bearer in the vicinity of Augusta.

New Hampshire

J. G. Conklin (May 24): Judging from the large numbers of hibernating larvae of the larch case bearer observed in different parts of the State this spring, larch will suffer rather severe defoliation by this pest during the present year.

Vermont

H. L. Bailey (May 24): The larch case bearer has caused much damage to larch during the past five years and has started work in large numbers again this spring.

Pennsylvania

J. N. Knull (May 24): The larch case bearer was found doing considerable damage to European larch in Franklin County.

Michigan

R. Hutson (May 24): This insect is abundant on small areas of tamarack in Cass County.

WOOLLY LARCH APHID (Chermes strobilobius Kalt.)

Pennsylvania

J. N. Knull (May 24): Many European larches in a plantation at Pond Bank, Franklin County, are infested.

MAPLE

SUGAR-MAPLE BORER (Glycobius speciosus Say)

Pennsylvania

J. N. Knull (May 12): Many sugar maple trees in the vicinity of Marklesburg are infested. Undoubtedly the 1930-31 drought aided these insects in establishing themselves in

in fast-growing trees. Some trees have been killed and many are dying.

MAPLE BLADDER GALL (Phyllocotes quadripes Shim.)

New York

E. P. Felt (May 24): Extremely numerous on a red maple at Newburgh, the infested leaves being practically covered with galls.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Indiana

J. J. Davis (May 25): The cottony maple scale is abundant on soft maple at Lizton and Portland.

Ohio

T. H. Parks (May 24): Very serious on soft maples in western Ohio.

OAK

AN APHID (Myzocallis discolor Monell)

District
of
Columbia

J. A. Hyslop (May 20): Unusually abundant on oak leaves on Museum grounds--some coccinellid larvae seen among them.

PINE

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Maine

H. B. Peirson (May): The first white pine weevil adults appeared April 20 at Parsonfield. Abundant on Scotch pine in Belfast and New Portland.

Pennsylvania

J. N. Knull (May 4): The first adults were observed on May 4, crawling up the trunks of white pines in the vicinity of Cross Forks.

BARK BEETLES (Coleoptera)

Pennsylvania

J. N. Knull (May 13): Many pines (Pinus banksiana) in a 15-year-old plantation at Pond Bank, Franklin County, were killed by Ips calligraphus Germ., I. grandicollis Eich., I. avulsus Eich., I. pini Say. The trees were infested during 1931 and their vitality was evidently lowered by the 1930-31 drought.

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Comst.)

Massachusetts

E. P. Felt (May 24): The Nantucket pine moth is locally very abundant on hard pines on Nantucket Island, adults beginning to issue the middle of May.

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Connecticut

R. B. Friend (May 23): There appears to have been a decided winter mortality, although comparative figures are lacking ~~for~~ previous years. The larvae are in the last instar and a few individuals have pupated. Scouting this spring revealed a light scattered infestation in the eastern part of the State.

PINE TUBE MOTH (Eulia pinatubana Kearf.)

New York

H. B. Peirson (May): Adults of the pine tube moth emerged April 18 at Ithaca.

A MOTH BORER (Parharmonia pini Kellicott)

New York

E. P. Felt (May 24): The pitch mass borer was unusually prevalent in a grove of white pines at Bedford Hills.

A SAWFLY (Neodiprion edwardsii Nort.)

Maine

H. B. Peirson (May): The pine sawfly was feeding on red pine in Lincoln, September, 1931. First record in State.

RED-HEADED PINE SAWFLY (Neodiprion lecontei Fitch)

Mississippi

J. P. Kislanko (May 9): Several colonies were observed feeding on the needles of slash pine saplings in the vicinity of Wiggins and Perkinston, causing heavy defoliation.

PITCH MIDGE (Retinodiplosis resinicola O.S.)

Massachusetts

E. P. Felt (May 24): The pitch midge is reported as prevalent on hard pine at Osterville by Mr. W. Wheeler, Jr.

SPRUCE

SPRUCE LEAF MINER (Argyroploce abietana Fern.)

New England

E. P. Felt (May 24): The spruce leaf miner is locally somewhat abundant upon Norway and Colorado blue spruce in southern New England.

Michigan

E. I. McDaniel (May 24): This is quite common throughout southern Michigan. This particular infestation is in the State forest at Alpena.

AN APHID (Chermes abietis L.)

E A U F H I C C O

Michigan

E. I. McDaniel (April 30): Complaints have also been received from Menominee of Adelges abietis attacking spruce.

(A. G. H. S. W.)

SPRUCE MITE (Paratetranychus uniunguis Jacobi)

New England

E. P. Felt (May 24): Generally prevalent in southern and southeastern New England and southeastern New York. A specimen recently brought in shows such a generally webbed condition that the basal half or two-thirds of all the older needles and some of the younger needles are distinctly shrouded with the delicate webs of this pest.

SPRUCE BUD SCALE (Physokornes piceae Schr.)

Maine

H. B. Peirson (May): The spruce bud scale was abundant on dwarf Alberta spruce April 22 in Bar Harbor.

WILLOW

A LACEBUG: (Corythucha salicata Gibson)

Oregon

D. C. Mote (April 21): The western willow tingid is quite serious in certain orchards in the Willamette Valley.
(B. G. Thompson)

INSECTS AFFECTING GREENHOUSE
AND ORNAMENTAL PLANTS

GREENHOUSE LEAF TIER (Phlyctaenia rubigalis Guen.)

- New York C. R. Crosby (April 29): Caused considerable damage to chrysanthemums, snapdragons, and cinerarias in a greenhouse.
- Pennsylvania C. A. Thomas (May 20): This insect has done some damage to snapdragons, etc., in a greenhouse in southeastern Pennsylvania.
- Ohio E. W. Mendenhall (May 10): Quite destructive on the strawberry-geranium (Saxafraga sarmentosa) and the Michaelmas daisies in the greenhouses in Springfield. It is destructive to a long list of plants in the greenhouse.

HORNWORMS (Sphingidae)

- Georgia O. I. Snapp (May 25): A very heavy infestation of hornworms has developed in an ornamental nursery near Fort Valley, causing defoliation of many plants.
- Michigan E. I. McDaniel (April 28): Severe losses have been suffered this season by greenhouse men who grow Easter lilies. Infested plants are stunted, the lower leaves turn yellow and the plants often fail to flower. The roots of such plants always show the bulb to be badly rotted and mites extending their activities into healthy tissue. Frequently stems are also infested.

GREEN PEACH APHID (Myzus persicae Sulz.)

- Mississippi J. P. Kislanko (May): Cineraria, weeping lanterna, and some other plants were very heavily infested with the green peach aphid in the greenhouses in Hattiesburg.

TOMATO PSYLLID (Paratrioza cockerelli Sulc.)

- Utah G. F. Knowlton (May 7): Adults are very abundant on matrimony vine at Plain City. Apparently the first generation has largely matured before many potatoes are planted.

JAPANESE MAPLE SCALE (Leucaspis japonica Okll.)

- Connecticut W. E. Britton (May 20): This scale has severely injured Japanese maple and flowering dogwood.

THRIPS (Thysanoptera)

- South Carolina W. J. Reid, jr. (April 27): Young azalea plants in the greenhouse of a nursery in Charleston are being seriously injured by

thrips. The infestation is the first of its kind that has come to the attention of the nurseryman.

Louisiana

W. E. Hinds (May 26): The greenhouse thrips (Heliothrips haemorrhoidalis Bouche) developed very abundantly out of doors through the mild winter and has seriously injured the foliage of Viburnums grown as shrubbery.

Mississippi

O. Lyle and assistants (May): An undetermined species of thrips is seriously damaging rose blossoms throughout the State. (Abstract, J.A.E.)

CAROLINA MANTIS (Stagmomantis carolina Johan.)

Maryland

E. N. Cory (May 15): Egg masses of this insect have been sent in from practically all over the State.

A GARDEN SLUG (Limax maximus L.)

Ohio

E. W. Mendenhall (May 24): Garden slugs are doing considerable damage to iris in gardens in Columbus. They damage the iris by eating holes in the leaves.

ARBORVITAE

ARBORVITAE LEAF MINER (Axyresthia thuella Pack.)

Connecticut

W. E. Britton (May 20): Considerable injury has been caused on young trees in a Branford nursery by this leaf miner.

BOXWOOD

BOXWOOD LEAF MINER (Monarthropalpus buxi Latou.)

Rhode Island

A. E. Stone (May 25): A small box plant having an unusually heavy infestation was brought into the office a week ago and in about three days a large number of the midges emerged.

Delaware

L. A. Stearns (May 25): First emergence of the box leaf miner was observed May 17 in Wilmington.

Georgia

T. O'Neill (May 20): First record of occurrence in this State. Determined from leaf galls, one full grown larva, and numerous eggs.

CAMELLIA

CAMELLIA SCALE (Lepidosaphes camelliae Hoke)

Georgia

O. I. Snapp (May 4): Unusually abundant on Camellia japonica bushes in Fort Valley.

CHRYSANTHEMUM

CHRYSANTHEMUM GALL MIDGE (Diarthronomyia hypogaea Loew)

Ohio

E. W. Mendenhall (May 25): The chrysanthemum midge has been held down pretty well in the greenhouses at Springfield but began to show some increase this spring.

GLADIOLI

GLADIOLUS THRIPS (Taeniothrips gladioli M. & S.)

Connecticut

B. H. Walden (April and May): Many of the small growers who did not treat the corms during the winter are finding them infested this spring.

California

W. G. Weigle (April 30): I collected specimens of the gladiolus thrips on gladiolus in Los Angeles County April 30. (Det. by H. Morrison.)

GRAPE MEALYBUG (Pseudococcus maritimus Ehrh.)

Michigan

E. I. McDaniel (April 30): P. maritimus are common on "glad" corms stored in warm quarters at East Lansing.

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curt.)

Maryland

E. N. Cory (May 13): Found in Prince Georges County.

IRIS

IRIS BORER (Macronoctua onusta Grote)

North Dakota

J. A. Munro (May 23): Specimens from Oliver County were sent in and were reported to have practically destroyed a fair sized planting of iris.

LARKSPUR

AN APHID (Aphis rociadae Ckll.)

Mississippi

J. P. Kislanko (May 5): An unusually heavy infestation on larkspur was observed in Hattiesburg.

CYCLAMEN MITE (Tarsonemus pallidus Bks.)

Wisconsin

E. L. Chambers (May 25): Delphiniums in several gardens near Milwaukee have been seriously injured by cyclamen mite.

PALM

A WEEVIL (Rhyssalus cruentatus Fab.)

Florida E. W. Berger & G. B. Merrill (May 24): Palm weevil moderately abundant at Delray on Phoenix canariensis. Reported by J. C. Goodwin.

ROYAL PALM BUG (Xylastodoris luteolus Barber)

Florida E. W. Berger & G. B. Merrill (May 24): Royal palm bug very abundant at Miami on royal palms. Reported by J. C. Goodwin.

RHODODENDRON

AN AMBROSIA BEETLE (Corthylus punctatissimus Zimm.)

New England and New York E. P. Felt (May 24): The pitted ambrosia beetle has been reported from several southern New England localities, and on Long Island, N.Y., it is stated that a group of 300 rhododendrons shows practically every stem infested. In some cases the infestation is so severe that the stems will have to be removed.

RHODODENDRON LACEBUG (Stephanitis rhododendri Horv.)

Maryland E. N. Cory (March 17): The rhododendron lacebug has been reported at Baltimore.

ROSE

A EUCOSMID (Argyroplote nimbatana Clem.)

Mississippi C. Lyle (May 21): Specimens of the rose budworm were received from Grenada on May 5.

ROSE APHID (Macrosiphum rosae L.)

California E. O. Essig (May 20): The rose aphid has been very abundant and destructive in the San Francisco Bay Region, in May.

SNOWBALL

SNOWBALL APHID (Aphis viburnicola Gill.)

Indiana J. J. Davis (May 26): The snowball aphid has been as abundant as usual at Knightstown and Lafayette, and probably elsewhere the past month.

Utah G. F. Knowlton (May 18): Aphids are affecting snowballs at Oak Creek.

SPIRAEA

GREEN CITRUS APHID (Aphis spiraeicola Patch)

Indiana J. J. Davis (May 26): The spiraea aphid has been very abundant at Knightstown and Lafayette and probably elsewhere the past month.

Mississippi K. L. Cockerham (April 23): An unusually heavy infestation of aphids was noted on spiraea shrubs in a yard at Biloxi, Miss. on April 23. Pyracanthas nearby were also infested. It was probably the same aphid which had spread over to these other shrubs.

TAXUS

BLACK VINE WEEVIL (Brachyrhinus sulcatus Fab.)

Connecticut W. E. Britton (May 20): There has been severe injury to Taxus plants in nurseries and ornamental plantings by grubs eating the roots, in New Haven, Milford, and Waterbury.

TRITONIA

A THrips (Eregmatothrips iridis Watson)

New York F. F. Smith (October 28, 1931): Collected on hardy Tritonia at Hamburg, October 28, 1931. First record in U. S. (Det. H. Morrison.)

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

MOSQUITOES (Culicinae)

Connecticut N. Turner (May 16): In Saybrook in one pool Aedes cantator Coq. was unusually abundant; also found in Milford, Stratford, East Haven, Madison, and New Haven. (May 20): A. canadensis Theob. bred slightly later than usual this year, emergence being in progress now. Collected from Orange and Bridgeport.

Delaware L. A. Stearns (May 23): A State-wide mosquito survey is in progress. First-brood of A. cantator took wing on salt marshes along the Delaware River and Bay during the last week in April. Trap collections for the first ten days in May for 16 communities

in the State show 84 per cent A. cantator and A. sollicitans Walk. and 16 per cent A. sylvestris and A. canadensis Theob.

Utah

G. F. Knowlton (May 21): Mosquitoes are very abundant in parts of Box Elder and Tooele Counties, being especially annoying in the vicinities of Corinne, Lamp, Penrose, Brigham City, Thatcher, Bothwell, and northern Skull Valley.

EYE GNATS (Hippelates pusio Mall.)

Florida

W. E. Dove & J. B. Hull (April 14): Eye gnats and conjunctivitis have been important along the shores of Lake Okechobee, according to Dr. Henry Hanson, State Health Officer.

J. B. Hull (May 19): At Pahokee, in company with Mr. Broughman, of the State Board of Health, eleven grams of gnats were collected in one trap during a period of 24 hours.

A MIDGE FLY (Chironomidae)

California

R. Bogue (May 9): A great deal of sickness in Santa Paula and Ventura was attributed this month to a species of midge getting into the water supply and wells. Approximately four hundred (400) cases have been reported so far.

SAND FLIES (Culicoides)

South Carolina

W. E. Dove and D. C. Hall (April 14): Since March sand flies have been annoying in the vicinity of their breeding places. During the past two weeks they were present in and about residences in the vicinity of Charleston. Poorly constructed ditches serve as concentration places for larvae during dry seasons.

Florida

J. B. Hull (April 14): Adults have been present in the vicinity of Fort Pierce since January 10. Emergence apparently takes place throughout the winter. The drainage ditches holding muck and decaying vegetation where there is no tidal action are serving for concentrations of larvae.

BLACK WIDOW (Lathrodectes mactans Fab.)

Maryland

P. Knight (May 25): Yesterday I went out in the fields and succeeded in collecting two females. During January, February, March, and April 38 of these spiders were collected.

California

R. Bogue (May 9): The black widow spider is very plentiful this year and many egg cases are being found.

CATTLE

COMMON CATTLE GRUB (Hypoderma lineatum DeVill.)

Michigan

E. I. McDaniel (May 25): The first appearance of adult flies for this year in Michigan was May 8. In some sections the grubs are very plentiful in the backs of cattle. H. lineatum is our common species, although we find H. bovis DeG. occasionally.

STABLE FLIES (Stomoxys calcitrans L.)

South Carolina

W. E. Dove and D. G. Hall (April 14): Stable flies annoyed live stock and dogs on the coast near Charleston during the past week. They were most abundant about stables near the salt marshes.

Missouri

L. Haseman (May 21): Stable flies are increasing rapidly at Columbia.

HORN FLY (Haematobia irritans L.)

Louisiana

F. C. Bishopp (May 28): The horn fly has been reported as unusually abundant at Laurel Hill. The correspondent states that they are more abundant than he has ever seen them; and that they have been since April 1st.

HORSE

SOUTHERN BUFFALO GNAT (Eusimulium pecuarum Riley)

United States

G. H. Bradley (May): The southern buffalo gnat appeared much earlier than usual in the gnat-infested territory this year. A few individuals were reported as seen about the middle of December, 1931. They were abundant about the middle of January and were definitely on the decline by the end of March. These pests were present in annoying numbers in Mississippi. They do not fly far into the hill country east of the Delta except along low river bottoms. In Arkansas there were records of their presence from many points. In Louisiana they were reported at Monroe and as fairly well distributed throughout Ouachita Parish, the eastern section of Richland and in several sections of Caldwell Parish, also at Winnfield and Natchitoches. They were also reported as present at Covington, Tennessee. This year the gnats appeared in gradually increasing numbers and as is usual under such conditions only isolated cases of their killing stock were reported.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

North Carolina W. E. Dove, D. G. Hall, and F. M. Prince (April 14): Stick-tight fleas have been observed at four different localities in the vicinity of Charleston during the past few weeks. One severe infestation was found on poultry. At other places dogs were infested.

PIGEON FLY (Pseudolynchia maura Bigot)

Florida J. B. Hull (March 20): Pigeons were infested with pigeon flies in the vicinity of Fort Pierce. Quantities of pupae were obtained during late February and March.

HOUSEHOLD AND STORED-PRODUCTS

INSECTS

TERMITES (Reticulitermes spp.)

General T. E. Snyder (April): During the month of April 256 cases of termite damage were reported to the Bureau of Entomology. The following list gives the number of cases reported from each section: New England, 5; Middle Atlantic, 90; South Atlantic, 55; East Central, 33; West Central, 20; Lower Mississippi 46; Pacific Coast, 7.

Indiana J. J. Davis (May 26): Termites were reported destructive in 18 localities.

Illinois W. P. Flint (May 20): More inquiries concerning these insects have been received during the last month than at any similar period. More than 80 inquiries concerning this insect have come in the last three weeks.

Kentucky W. A. Price (April): During the past month we have had 48 inquiries regarding the treatment for termites. These requests have come from all sections of the State.

Missouri L. Haseman (May 21): We have received numerous complaints on termites. Swarming was mostly completed by early May.

Alabama J. M. Robinson (May 20): Termites reported abundant from 8 places.

Texas F. L. Thomas (May): Termites reported swarming from garage at College Station and a home in Brazos County April 24. Termites reported in house at Port Arthur on April 11 and at Carthage May 19.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

Maryland

E. N. Cory (May 13): The Argentine ant successfully overwintered outside of greenhouses in Baltimore. The nests were located in trees, principally cherry, walnut, and horse chestnut, and the brick bases of large plant vases in three localities, and in the base of an iron vase in two locations. Ants were noted to forage at temperatures as low as 36° F. at various times during the winter.

EUROPEAN EARWIG (Forficula auricularia L.)

Idaho

C. Wakeland (May 21): The European earwig is quite abundant in some houses in Moscow and has been reported from Coeur d'Alene.

California

E. O. Essig (May 3): The European earwig reported in gardens and house at Melrose, East Oakland. First record for this locality.

PEA WEEVIL (Bruchus pisorum L.)

Michigan

E. I. McDaniel (April 28): The pea weevil has not been of economic importance in Michigan for a number of years. Recently we have been receiving specimens - mostly from small gardeners in seeds held over for planting.

Idaho

C. Wakeland (May 21): The pea weevil in the northern Idaho area is found in small numbers in the blossoms of volunteer peas but no eggs have yet been deposited. Planted peas are very late and will not be in the blossom stage for a period of weeks yet.

Oregon

D. C. Mote (April 21): Pea weevil adults were found in a field April 15. (A.O. Larson.)

WHITE-MARKED SPIDER BEETLE (Ptinus fur L.)

Minnesota

H. H. Shepard (May 11): Serious infestation at Duluth in dock through which flour is being moved.

INSECT CONDITIONS IN PUERTO RICO DURING APRIL AND MAY, 1932

M. D. Leonard

Insular Experiment Station, Rio Piedras, Puerto Rico.

The scarabaeid beetle Dyscinetus barbatus Fab. was abundant during early May this year and last year, at Isabela. (G.N. Wolcott.)

The first adult Lachnosterna vandinei Smyth was observed this year on March 10, the second on April 10, and they were abundant during late April. Last year the first adult was observed on April 19 and they were abundant last year in April, at Isabela. (G.N. Wolcott.)

The first adult Lachnosterna citri Smyth was observed this year on April 15 and they were abundant on April 17; last year the first adult was observed on April 17 and they were abundant on the 18th and 19th, at Isabela. (G.N. Wolcott.)

The period of greatest abundance of the large weevil (vaquita) Diaprepes abbreviatus L. as adult is also during the latter part of April, following a period of several months when rarely can an individual be found. During the rest of the year the beetles are present in reasonable numbers, with minor variations, but during the first quarter of the year adults are very scarce. Their appearance in the latter part of April coincides with the new flush of growth on citrus and other trees, caused by spring rains, which have been normal this year. Even for this irrigation district, however, one can hardly consider the almost 10 inches of rainfall that have fallen in the last 48 hours as being quite normal.

A pentatomid bug, Fecelia minor Voll. (H.G. Barber det.), was found in small numbers (adults) on the fruit in an orange grove near Ponce and in two groves near Penuelas on January 25. (R.G. Oakley.)

A pupa of an encyrtid, Leptomastix dactylopii How. (C.F.W. Muesebeck det.) was found in a guava fruit infested with larvae of Anastrepha sp. (C.G. Anderson.)

The scale Pseudoparlatoria ostreata Oshl. was heavily infesting fruits and stems of a papaya tree in a garden in San Juan, January 13. (A.S. Mills; Morrison det.)

The tessellated scale, Eucalymnatus tessellatus Sign., was moderately infesting the leaves of 4 Malay apple trees near Rio Piedras, January 1 (C.G. Anderson; G.B. Merrill det.), and a light infestation on the leaves of one tree of Calophyllum antillanum and a heavy one on a palm in Pennock's nursery near Rio Piedras, February 17 (C.G. Anderson). Listed from Puerto Rico in Florida State Plant Bd. Quart. Bul. 7(4): 260-261, 1923.

There was a light infestation of a bean pod-borer, Maruca testulalis Geyer, in a hamper of lima beans from Cayey for shipment, March 24 (C.G. Anderson; C. Heinrich det.), and one pod infested in a hamper of lima beans

from Isabela, March 16 (C.G. Anderson; C. Heinrich det.). Also, 11 per cent of the lima bean pods were infested on a 3-acre planting at Cidra on February 26. (A.S. Mills; Wm. Schaus det.) An adult of Microbracon tritriphagae Mues. was reared from a larva found on a larva of Maruca testulalis Geyer in a hamper of lima bean pods from Vega Baja, March 24. (C.G. Anderson; C.F.W. Muesebeck det.)

A dipterous leaf miner, Agromyza inaequalis Mall., was infesting with blotch mines practically all the leaves in a small garden patch of lima beans at the Forestry Station at Rio Piedras, January 15. (R. Faxon; C.T. Greene det.)

An aphid, Megoura viciae Kalt., was lightly infesting the leaves and pods of lima beans near Rio Piedras, February 26. (R. Faxon; P.W. Mason det.). Apparently not previously recorded from Puerto Rico.

A pentatomid bug, Thyanta perditor Fab.. Adults were present in moderate numbers on the leaves in a 3-acre patch of lima beans at Loiza, February 7. (A.S. Mills; H.G. Barber det.)

A noctuid, Prodenia eridania Cram. (Wm. Schaus det.), was moderately infesting tomato fruits which the larvae were eating out, at the Vivell farm at Rio Piedras, February 15. (R. Faxon.) Larvae of a noctuid, Prodenia eridania Cram., were found to be eating many of the leaves in a 5-acre field of Irish potatoes on the Ellsworth farm at Cidra, February 5, and a light infestation of the larvae was found on foliage of a 5-acre field of peppers on the Cabrera farm at Loiza on February 8. (A.S. Mills; W. Schaus det.)

The corn ear worm, Heliothis obsoleta Fab., was heavily infesting the ears in 4 boxes of corn from Anasco, March 7. (A.G. Harley; C. Heinrich det.)

An adult of the fall army worm, Laphygma frugiperda S. & A., was found on an eggplant leaf at Isabela, March 8. (C.G. Anderson; Wm. Schaus det.)

A heavy infestation of the tobacco flea beetle, Epitrix parvula Fab., was found on 20 eggplants examined at the Cabrera farm at Loiza, March 14. (A.S. Mills; H.S. Barber det.)

A eulophid, Chrysocharis parksi Cwfd. Adults were reared from pupae of Agromyza pusilla Meig., mining in pea leaves at Cidra, February 26; 30 per cent of the dipterous pupae were parasitized with this or another species.

A bug, Piezosternum subulatum Thunb. (H.G. Barber det.) A small number of adults were found on garden pea leaves in a small patch on the Vivell farm at Trujillo Alto, February 5. (A.S. Mills.)

The tamarind pod-borer, Sitophilus linearis Hbst. Adults and larvae were found feeding in one pod in a crate of tamarinds for shipment to the States, February 25. (C.G. Anderson; L.L. Buchanan det.)

INSECT CONDITIONS IN COSTA RICA DURING MARCH AND APRIL, 1932

C. H. Ballou
San Jose, Costa Rica

The citrus blackfly (Aleurocanthus woglumi Ashby) is very abundant and injurious in Maceta and Central.

Scale insects are quite troublesome on both the older trees and the newly-budded stock. Among the species occurring in numbers are Lepidosaphes beckii Newm., Saissetia hemisphaerica Targ., and Coccus hesperidum L.

Grasshoppers (various species) are very destructive to the tender leaves of the newly-budded citrus stock.

Avocado weevil borers (Cocturus constrictus Champ., and Cocturomimus sp.) were found damaging avocado trees at San Jose. These insects are attacked by a microgasterid parasite of apparently a new species and maybe a new genus.

A mining scale (Howardia biclavis Const.) was found causing damage to Japanese persimmon at San Jose.

A membracid (Aconophora pallescens Stal) was found injuring young shoots of papaya March 22 at San Jose.

A pentatomid (Thyanta perditor Fab.) causes the blossoms of peach to fall. These were active on April 4 at San Jose.

The white peach scale (Aulacaspis pentagona Targ.) is quite seriously infesting peach and mulberry, and to a lesser extent mango, in the San Jose area.

A scale insect (Pseudischnaspis bowreyi Ckll.) was found infesting apple on March 22 at San Jose.

A flea beetle (Enitrix fuscata Jac.-Duv.) was damaging tomatoes from March 22 to April 23 at San Jose.

A leaf-footed bug (Lentoglossus zonatus Dall.) was very abundant and apparently quite harmful to tomato fruits during the third week in April.

A bug (Emelytatus notatus Dist.) was observed damaging tomatoes at San Jose March 22 and was still active in the field by the end of April.

INSECT CONDITIONS IN HAITI FOR THE MONTH OF APRIL, 1932

by

Andre Audant

Service National de la Production Agricole

Port-au-Prince, Haiti

Considerable damage to coffee plants is reported from the southern part of Haiti by the coffee cricket (Chremon repentinus Rehn). The green scale (Coccus viridis Green) is also present on the leaves.

A yellowish scale, Aspidiotus destructor Sign., is severely damaging coconuts.

The bean leafhopper (Empoasca fabalis De Long) is found on beans and is causing considerable damage in transmitting the "yellows" disease.

Swarms of termites, mostly Nasutitermes morio Latr. and Cryptotermes brevis Walk., have been emerging all through the rainy days of the latter part of the month.

The striped citrus curculio (Prepodes 4-vittatus Oliv.) was feeding on the citrus leaves of trees located on the Experimental Ground of the Damien Station, together with two other beetles Lochnopus atramentarius Gyll. and L. proteus Oliv.

Young papayas, especially of the larger varieties, are infested with larvae of the papaya fruit fly (Toxotrypana curvicauda Gerst.). The flies are not very abundant, since the laborers are picking up the infested fruits to burn them.

Citrus fruits in Port-au-Prince have been quite severely infested with a black fly (Aleurodicus minimus Quaint.), the purple scale (Lepidosaphes beckii Newm.), and the citrus mealybug (Pseudococcus citri Risso).

The West Indian fruit flies (Anastrepha striata Schin.) are infesting mangoes. The infestation, rather light on the better varieties, is quite severe on the common so-called "Mango Jeremie."

The palm leaf skeletonizer (Homaledra sabalella Chamb.) is infesting the leaves of the latanier (Sabal domingensis) in the Cul de Sac Plain.

The melon aphid (Aphis gossypii Glov.) has been reported from many melon patches in the vicinity of Port-au-Prince.